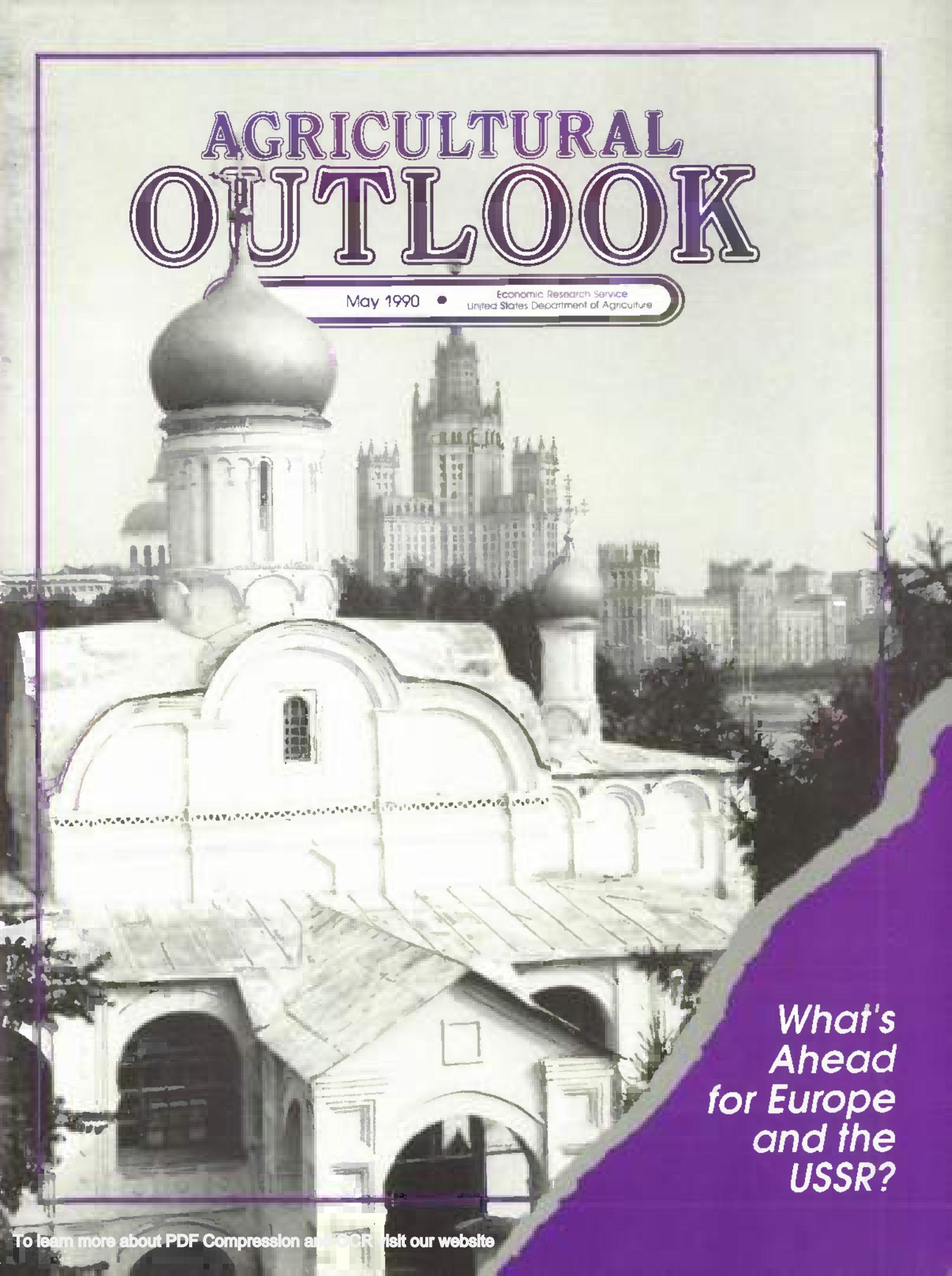


# AGRICULTURAL OUTLOOK

May 1990

Economic Research Service  
United States Department of Agriculture



What's  
Ahead  
for Europe  
and the  
USSR?

# AGRICULTURAL OUTLOOK

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## News of U.S. and Mexican Wheat, Planting Intentions, and Grain Quality Issues

**U.S.** wheat stocks on March 1 were the lowest in 15 years. But the tight supply situation has not sustained prices. From January through mid-March, wheat prices dropped about 10 percent, reflecting expectations of a larger 1990 crop. Winter wheat acreage seeded last fall was up nearly 4 percent from a year earlier, and 71 percent of the crop was reported in good or excellent condition as of mid-April.

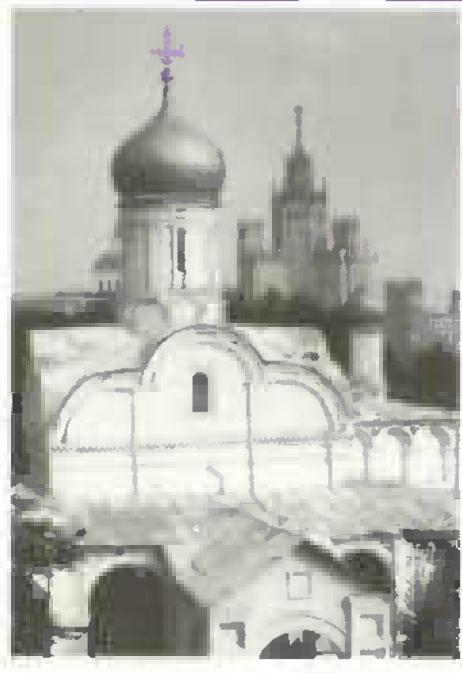
Farmers' spring wheat planting intentions, combined with winter wheat seedings, suggest total wheat area planted may be up only 1.2 percent from last year. But some of last year's wheat area was counted twice, because farmers reseeded damaged winter wheat acreage with spring wheat. Thus, this year's area increase is understated.

In addition, growing states report that this season's winterkill has been lower, so harvested area may post larger gains than planted area. The larger harvested acreage, assuming yields recover, points to a crop substantially bigger than the 2 billion bushels in 1989.

According to the *March Prospective Plantings* report, farmers say they plan to plant about the same area to feed grains as last year, but about 2 percent less acreage to soybeans. For cotton, favorable prices, driven by strong foreign demand and record-low stocks, could push planted area up 17 percent.

Global sugar consumption is expected to exceed output again in 1989/90, causing stocks to drop to the lowest since 1980/81. With stocks approaching 17 percent of use, world sugar prices will remain extremely sensitive to changes in production estimates.

U.S. sugar output is 4 percent lower than in 1988/89, partly explaining this year's larger sugar import quota. In March, U.S. sugarbeet growers said they expect to plant 4.7 percent more beet area than



last year. If so, beet acreage will be the highest since 1976.

In Mexico, policy reforms have cut support to domestic wheat producers. Assuming economic recovery there and specific movements in international prices, Mexican wheat imports could post a threefold gain by the year 2000, according to a forecasting model. The U.S. probably would meet most of the demand increase. Mexico began liberalizing its economy following the 1982 debt crisis.

Although the U.S. is a major exporter of grains and oilseeds, some international buyers believe that consistently clean grain can be obtained more easily from other countries. Pending legislation would give the Federal Grain Inspection Service the authority to prohibit blending high-quality grains with lower quality grains containing nongrain substances, and to set export cleanliness standards equal to those of competing exporters.

European agriculture is at a crossroads. Eastern European countries are gearing up to become more serious players in

international markets, while the heavily subsidized farmers in the EC are facing possible reforms in farm policies as the GATT negotiations near a conclusion.

If Eastern European countries can close half the gap between their productivity and the EC's, and eliminate their price subsidies, forecasts show that the region could become an exporter of beef and pork to countries aside from the Soviet Union by the year 2000. Eastern Europe also could export wheat and some coarse grains, while importing more oilseeds and high-value products. The gains would come from more market-oriented input delivery systems and private land ownership.

But, the Eastern European countries could instead choose to mimic the EC's policies of high support to farmers. If they do, returns to farmers would rise substantially, and the countries could significantly boost exports by 2000 at well below EC prices.

On the other hand, if the GATT talks lead to a more liberalized trading environment, EC producer incentives would be cut, and EC agricultural output would grow more slowly or actually decline. In that case, the Eastern European countries would be limited in the types of subsidies they could offer their farmers if the countries wish to operate in the international marketplace.

In March, the Soviet Union and the U.S. agreed in principle on a new Long-Term Grain Agreement. It could take effect next year. Coupled with continuing Soviet grain agreements with Canada and Argentina, it should commit the USSR to large imports through at least the first half of the 1990's. Soviet willingness to extend grain import commitments reflects marked shortfalls in domestic supplies, despite calls for self-sufficiency.

## Agricultural Economy

# Larger Output In 1990/91

**L**arger agricultural output in the U.S. likely will soften prices, but continued growth in the general economy and strong international demand for U.S. commodities will lessen the impact. Thus, consumers will enjoy a plentiful supply of moderately priced food, and farm incomes will remain near last year's highs.

U.S. farmers are preparing the soil and planting 1990 crops. For most, field conditions are better this spring than during the past couple of years. Moisture in most areas is adequate for germination and early growth. So, with fairly typical summer rainfall, farmers will harvest large crops.

But, as usual, many factors will affect crop development before this fall. Some areas, such as the Northern Plains, will be more dependent on timely rains because of inadequate soil moisture reserves.

### Planting Intentions Mixed

The number of acres seeded this year will be about the same as last year. Farmers say they intend to plant slightly more acres to food grains, about the same number to feed grains, and a bit less to soybeans. But, they expect to seed 17 percent more land to cotton.

Acreage shifts among crops reflect changing economic conditions and farm program adjustments. Inputs, such as seeds, fuel, and farm chemicals, are in adequate supply, although their prices are a touch higher than last spring.

Based on the *Prospective Plantings* report, winter wheat acreage is up nearly



4 percent from a year ago, while durum and other spring wheat seeding probably will be about 5 percent smaller. However, reseeding of winterkilled wheat in Washington and Montana in 1989 boosted last year's spring wheat area, thus overstating this year's decline.

Farm program provisions were relaxed somewhat for the 1990 crop. However, wheat prices have been declining for some time, even though wheat stocks will be very low when the 1990 harvest begins—equal to only 19 percent of expected use.

Dryness lingers in the Northern Plains, which may encourage farmers to fallow more land this summer. Improved prospects in other wheat growing countries will intensify competition in international markets during 1990/91.

Corn farmers say they will plant 3.5 percent more acres in 1990, but seeded acres of barley, oats, and grain sorghum all will be smaller. Corn Belt farmers favor corn over soybeans as the price relationships currently tilt toward planting corn. Moreover, should the market soften this fall, corn farmers will receive deficiency payments while soybean farmers will not.

Acreage planted to soybeans likely will decline about 2 percent. Double cropping probably will fall in the Southeast, and soybeans grown in South America will offer stiff competition. Total use of

soybeans is rising in 1989/90, but not enough to offset the larger 1989 crop. So, stocks will be up moderately and prices are weakening.

Cotton farmers are upping acreage significantly because stocks are being pulled down sharply as domestic use and exports rise. Cotton prices are running quite a bit above a year earlier. Also, acreage reduction requirements for farmers participating in the cotton program were lowered, encouraging expanded acreage.

### Livestock Output Record High

Livestock output has set records in each of the past several years, and production in 1990 will be record large again.

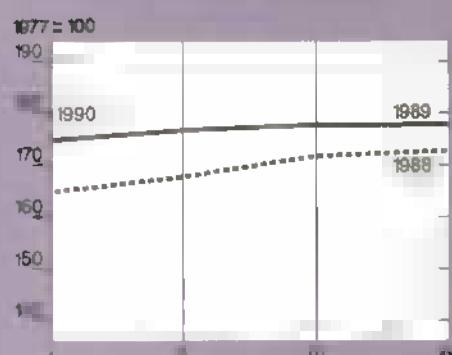
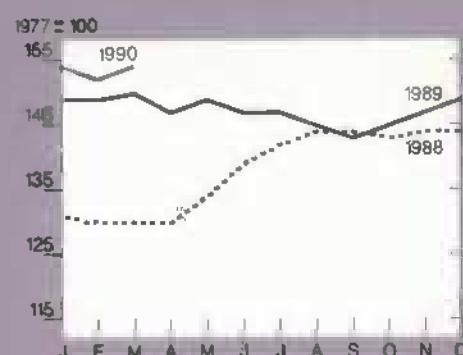
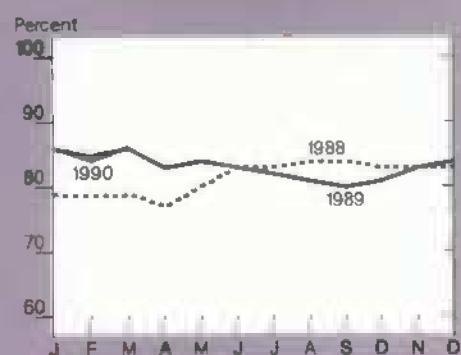
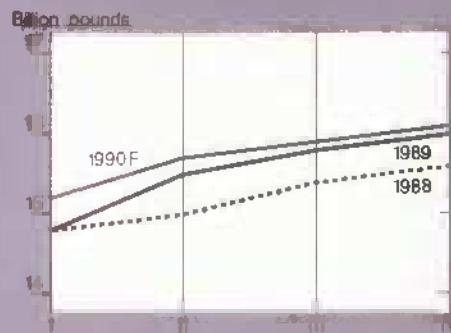
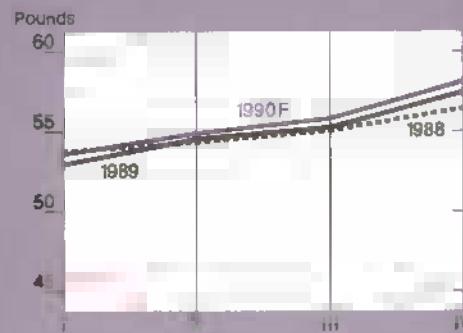
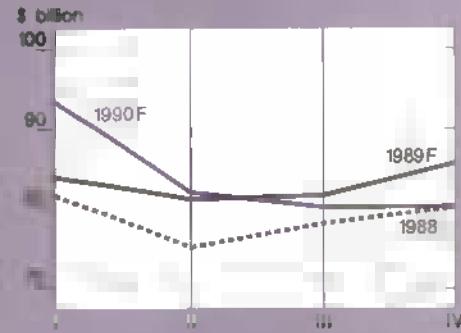
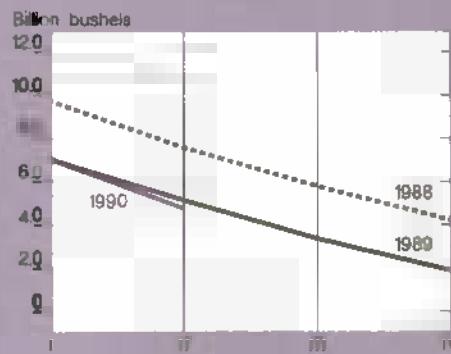
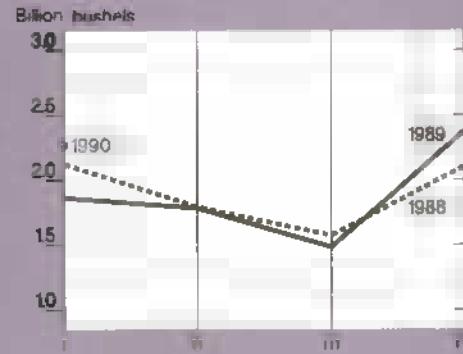
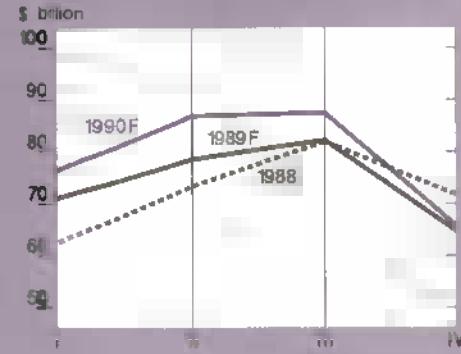
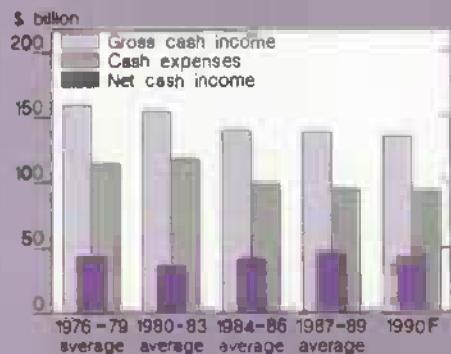
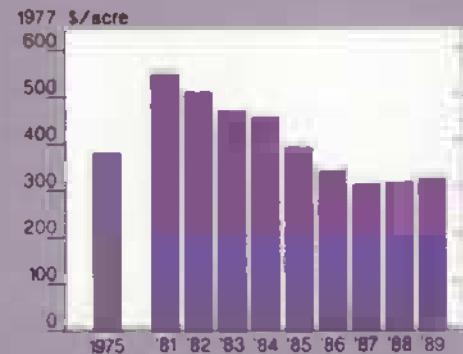
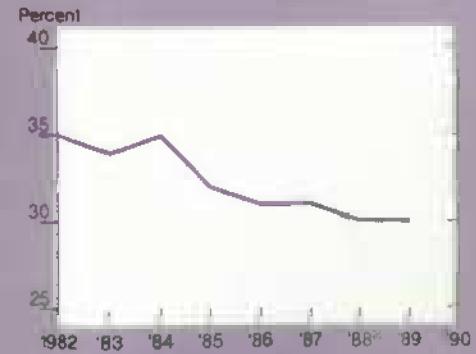
Poultry is accounting for the upswing; the red meats are holding about steady. Larger production of broilers and turkeys reflects not only the cost structure of the industries, but strong demand for poultry. Demand has been boosted in recent years by a number of new items featured at the meat counter and on fast-food menus, as well as consumers' health perceptions.

Returns to broiler producers have been positive for many months, and they probably will remain so through the end of the year. Production increases will trim broiler prices. But, declining feed costs will partly offset the lower prices.

Pork producers have enjoyed improved returns in recent months, as pork output has been below and prices well above a year earlier. Cattle feeders are receiving more for fed cattle shipped to slaughter, but profit margins remain low.

Broiler production is expected to continue to rise in the months ahead. Pork production will not turn up until late in the year at the earliest. Fed cattle marketings likely will increase this spring and summer, reflecting the larger number of animals currently in feedlots. However, slaughter of cows and nonfed cattle will decline as producers begin to rebuild the

## Prime Indicators of the U.S. Agricultural Economy

**Index of prices paid by farmers****Index of prices received by farmers<sup>1</sup>****Ratio of prices received/prices paid****Total red meat & poultry production<sup>2</sup>****Red meat & poultry consumption, per capita<sup>2,3</sup>****Cash receipts from livestock & products<sup>4</sup>****Com beginning stocks<sup>5</sup>****Com disappearance<sup>6</sup>****Cash receipts from crops<sup>4</sup>****Real cash income<sup>7</sup>****Average real value of farm real estate****Farm value/retail food costs**

<sup>1</sup>For all farm products. <sup>2</sup>Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts. <sup>3</sup>Retail weight. <sup>4</sup>Seasonally adjusted annual rate. <sup>5</sup>Dec.-Feb.; <sup>6</sup>Mar.-May; <sup>7</sup>June-Aug.; IV=Sept.-Nov. <sup>8</sup>Cash expenses plus net cash income equals gross cash income. F=forecast.

## Agricultural Economy

herd following a long downswing in numbers, leaving aggregate beef production about 1 percent larger than a year earlier.

### **Meat Exports Rise**

Increases in U.S. meat exports have lessened the price impact of larger meat production on livestock and poultry producers. In 1985, the U.S. imported 3.3 billion pounds of meat, while exports totaled 0.9 billion pounds. This year, imports may decline to 3.1 billion pounds, and exports are likely to rise to 2.5 billion. Thus, the meat trade deficit is dropping from 2.3 billion pounds in 1985 to less than 0.7 billion this year.

The growth in U.S. meat exports came about because the Japanese market is opening and exports are increasing to other Asian countries, the Soviet Union, and Eastern Europe. Most of the growth has been in beef and broilers.

Meat imports into the U.S. have not grown since the mid-1980's. Although the meat import law has been a binding factor for beef in 4 of the last 10 years, slow growth in U.S. beef consumption and low U.S. pork prices relative to other markets have made the U.S. less attractive to major exporters. Pork imports have also been down a little because of lower production in the EC and labor disputes in the Canadian packing industry. *(Donald Seaborg (202) 786-1880)*

*Ed. note: This is Don's last article for Agricultural Outlook; he is retiring after 32 years of continuous federal service. On behalf of all who work on USDA's outlook programs, I thank Don for his guidance and contributions, and wish him well in his future endeavors. AO*

## Livestock, Dairy, and Poultry Overview

*Increasing fed cattle marketings in the second and third quarter are expected to push down cattle prices. Beef prices should drop later as retailers again run beef specials. Low March hog and pig inventories indicate higher prices for both hogs and pork this summer.*

*Wholesale and retail poultry prices should be somewhat lower in 1990 because of continued broiler and turkey expansion. Egg prices are also expected to decline from first-quarter highs. Milk prices likely will continue dropping from their unusual 1989 levels until seasonal price rises appear later in the year.*

### **Feedlot Placements Up**

In the seven monthly reporting states, the number of cattle on feed on March 1, 1990, was the largest for the date since 1974. The total was also 7.3 percent greater than the 1985-89 average. Except for February, placements have been above a year earlier since September 1989. And February placements were still above the 5-year average. Marketings in the seven reporting states during February were even with the previous 5 years' average and only 1 percent below 1989.

Many of the feedlot placements in the seven reporting states have been on feed for several months. Therefore, marketings should rise and remain above last year during the next two quarters.

Reduced cattle slaughter in February and March resulted in slaughter and beef production for first-quarter 1990 being about 1 percent below a year earlier. Fed cattle slaughter was down in spite of large cattle on feed inventories. More of the cattle placed on feed last fall appar-

ently were light weight, thus requiring more time on feed before being marketed.

However, slaughter and beef production are expected to increase 3 to 4 percent above 1989 in the second and third quarters.

The retail Choice beef price has been record high since November 1989. Choice 550-700 pound boxed beef prices set a record in January and have stayed high since. Prices for Choice fed steers at Omaha have remained in the upper \$70's per cwt through mid-April, with reports of some sales over \$80. Prices averaged \$73.75 during first-half 1989, again with some sales over \$80.

Uncertainty about when increased fed beef slaughter will begin has caused retailers to limit beef specials. However, as marketings rise and wholesale cattle prices decline, beef and broilers should become more attractive to feature than pork.

Slaughter cattle prices likely will begin to float down to the mid-\$70's as marketings increase in late April and May. In turn, wholesale prices may follow by dropping to \$117-\$119.

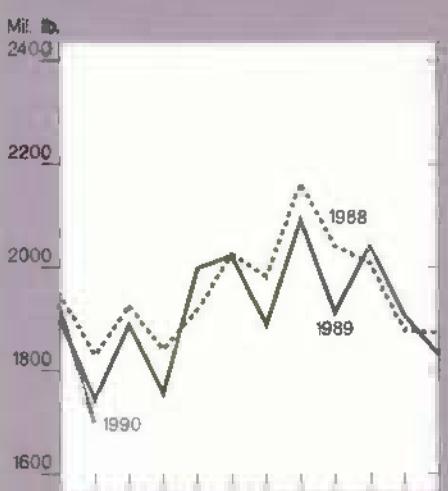
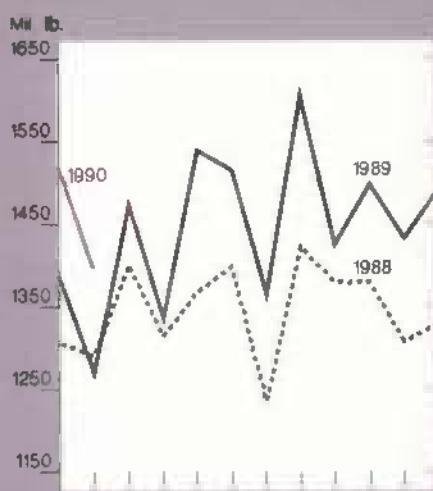
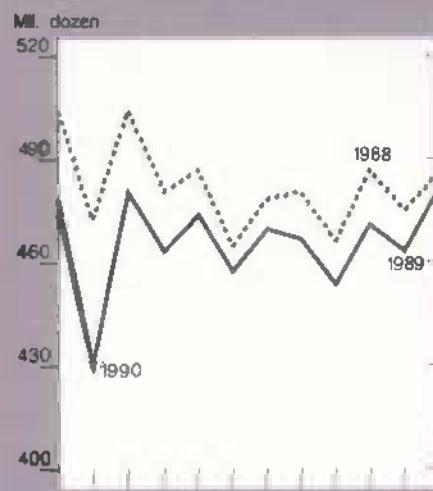
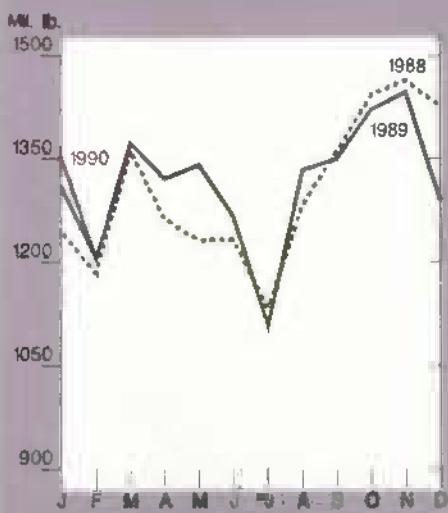
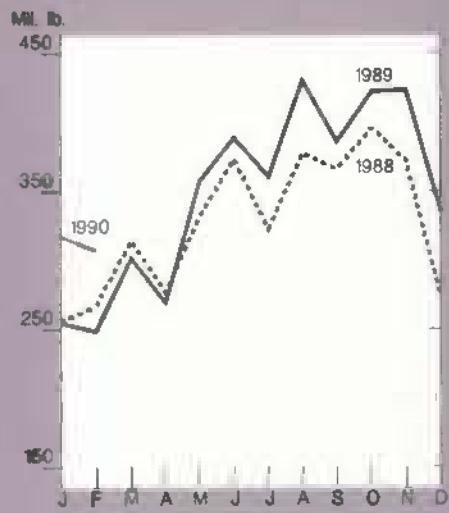
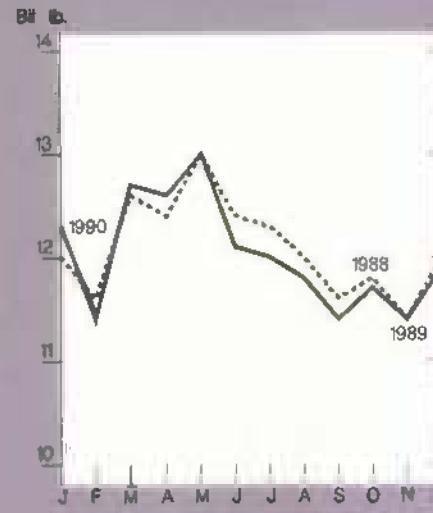
Retail prices likely will decline during the second and third quarters. As fed cattle prices slip, farm-to-retail spreads are expected to widen until retailers are confident supplies will be adequate to schedule beef specials.

### **Hog & Pig Stocks Down**

At 51.7 million head, the U.S. hog and pig inventory on March 1 was 2 percent smaller than a year earlier. The reduction likely will contribute to strong hog and pork prices through summer, with retail prices reaching record highs.

Commercial pork production could drop substantially below 1989 in the second and third quarters, because of the reduced pig crop last fall and winter and the smaller hog inventory on March 1. Pork supplies will be further limited by smaller cold storage stocks.

## Production of Livestock and Products

**Commercial beef**

**Broilers<sup>1</sup>**

**Egg<sup>2</sup>**

**Commercial pork**

**Turkeys<sup>3</sup>**

**Milk**


<sup>1</sup>Federally inspected production, ready-to-cook.

Barrow and gilt prices may average in the mid-\$50's per cwt at the seven markets this spring and summer, possibly reaching \$60 at the seasonal peak. Composite retail pork prices, which have risen sharply in the past year, could exceed \$2.00 per pound for the first time ever.

Although breeding inventories are down from a year earlier, favorable returns may encourage hog producers to expand. As a result, pork production could rise slightly above 1989 in the fourth quarter. March 1 farrowing intentions for March-May rose from December, perhaps signaling an expansion. March-May

farrowings will supply most of the hogs for fourth-quarter slaughter.

As of March 1, producers intended to have 3 percent fewer sows farrow during June-August than a year earlier, suggesting lower hog slaughter in early 1991. However, higher net returns could cause producers to modify their intentions. An upturn in breeding inventories is apparently on the horizon, pointing to larger pork supplies in 1991.

### Broiler Output Expands

The broiler industry is entering its traditionally strong late spring and summer season in a relatively favorable position.

New promotions by some fast-food chains have contributed to demand. Broiler production, aided by relatively low feed costs, continues to be profitable, encouraging further expansion.

Output for the second quarter, and for the year as well, is expected to be about 7 percent above a year earlier. The 12-city average wholesale broiler price dropped from 60 cents per pound in March to the mid-50's in April, 8-10 cents lower than a year earlier.

But the price situation is about to firm up a bit. Second-quarter prices are expected

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to average in the high 50's, compared with the unusually high 67 cents a year ago. Third-quarter prices are likely also to average in the high 50's, reflecting seasonal factors, greater pork prices, continued strong beef prices, and large exports.

Retail prices for whole fryers in the first quarter were little changed from a year earlier. But, for the second quarter they are expected to be slightly below a year earlier, averaging in the low 90's. For the year, retail prices likely will average in the high 80's, down from 93 cents in 1989. Per capita broiler consumption may exceed 70 pounds this year.

Although still a record, broiler exports for 1989 have been revised downward by 116 million pounds to 859 million pounds. Exports for 1990 are forecast to push up to 940 million pounds, reflecting strength in traditional markets and large sales to the USSR.

### Turkey Expansion Slows

Second-quarter turkey output probably will increase 7-8 percent over 1989, compared with about 20 percent in the first quarter. Third-quarter production likely will be up only slightly. In contrast, during 1989, first-half production was unchanged from a year earlier and the growth occurred in the second half.

Year-to-year increases in poult placements have been slowing steadily since September 1989. In March, placements were up only 1 percent from a year earlier. Poor producer returns since third-quarter 1989 have been an important factor. Estimated net returns during the first quarter, at a minus 7 cents per pound, were about the same as last year, even though feed prices were 17 percent lower.

Second-quarter returns are likely to be close to breakeven. Last year, the highest returns were realized during the second quarter. But this year, returns are expected to improve further and be above breakeven in the second half.

Wholesale prices may increase to about 60 cents per pound during the second quarter, and to about 65 cents in the third quarter. Despite sharp production increases, prices began moving up in February. But at 56.5 cents, first-quarter wholesale hen prices in the Eastern region remained 9 percent below a year earlier. Retail featuring of turkey meats, facilitated by relatively high red meat prices, played a role in the upturn.

### Egg Prices Steady

Egg production is forecast to rise 1 percent in 1990, with most of the increase in the second half. First-quarter table egg production was 1 percent below last year, at 1.2 billion dozen, while second-quarter output likely will be 1 percent higher.

Production in the third and fourth quarters is expected to increase 1 and 2 percent. On March 1, the table egg-type flock numbered about 230 million hens, fractionally smaller than last year.

The New York City wholesale price for grade A large eggs in March remained nearly unchanged from a year earlier, at 92 cents per dozen. Prices in April averaged in the low 80's, as buying for Easter eased. Second-quarter prices are expected to average about 77 cents per dozen, compared with 75 a year ago.

In the second half, increased production likely will push wholesale prices below last year's average. Prices are projected to average about 75 cents for the year, down 9 percent from 1989. However, producers can anticipate positive net returns for much of the year, reflecting lower feed costs.

Retail prices are expected to average 94-96 cents per dozen in the second quarter, slightly lower than last year. For the year, retail prices likely will average in the low 90's, down 8 percent from 1989.

### Milk Prices Plunging

The January 1990 average all-milk price dropped 40 cents from the extremely

high \$16.10 per cwt posted in December. In February, the all-milk price was down another \$1.30, and by March it had declined to \$13.80. The March Minnesota-Wisconsin price of manufacturing grade milk was down to \$12.02, a \$2.91 decline during the first 3 months of 1990.

Seasonal changes in production and use, loss of the export market for nonfat dry milk, and recovery in milk production contributed to the decline. Milk prices may continue to drop during the second quarter.

Although very strong cheese disappearance has temporarily reversed wholesale prices, seasonal price rises later in 1990 are unlikely to match those of 1989. For the year, milk prices may average 4-9 percent less than in 1989.

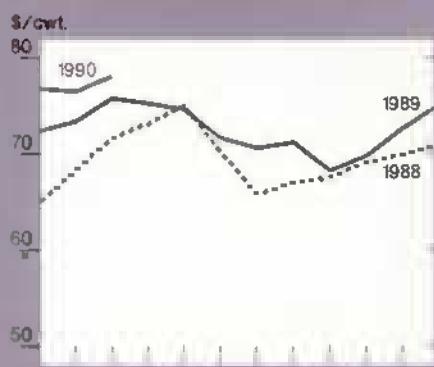
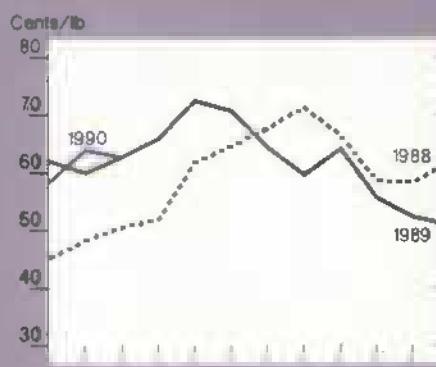
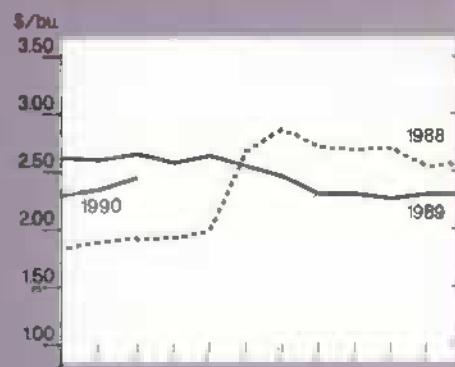
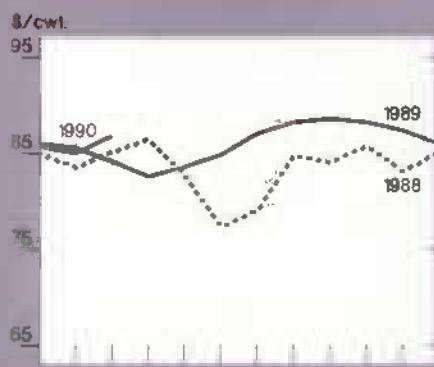
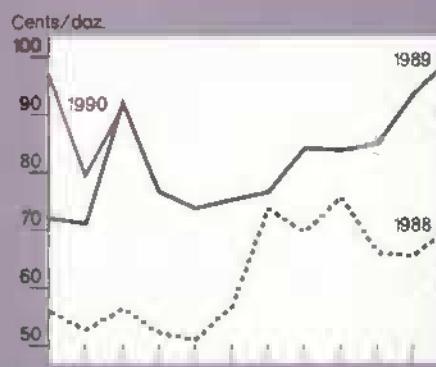
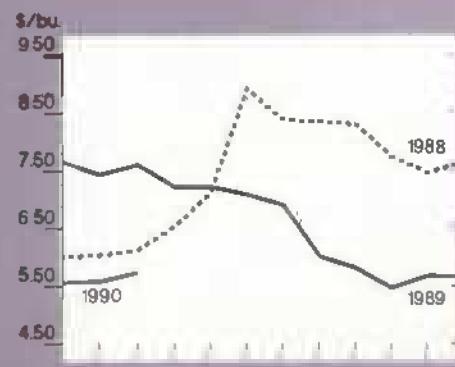
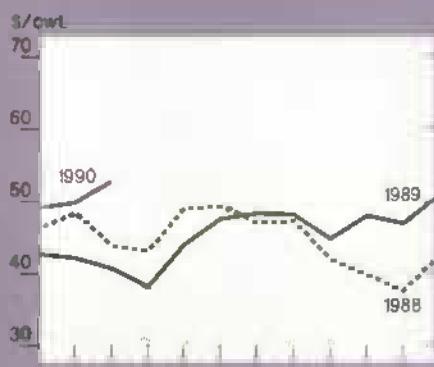
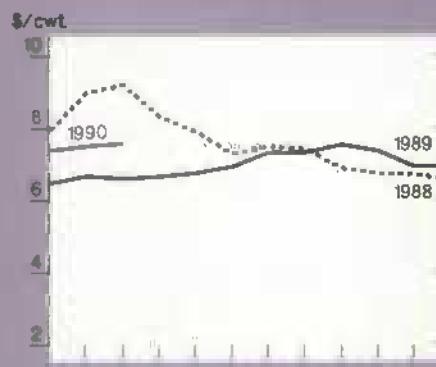
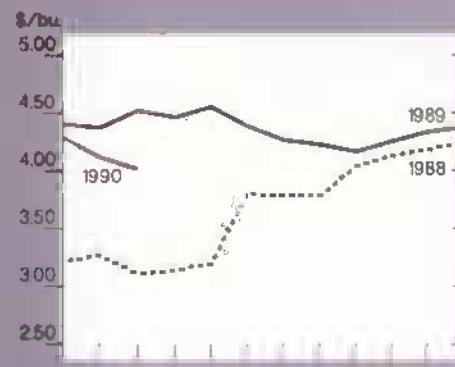
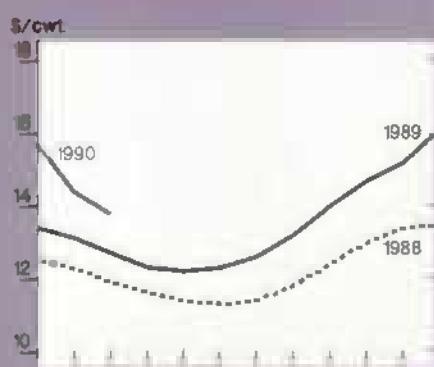
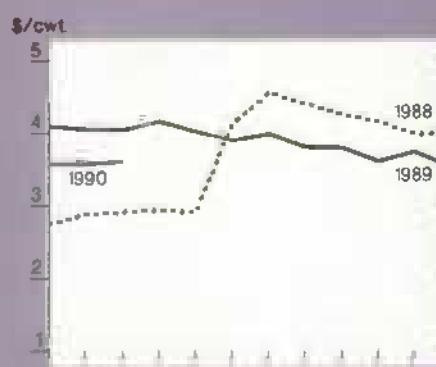
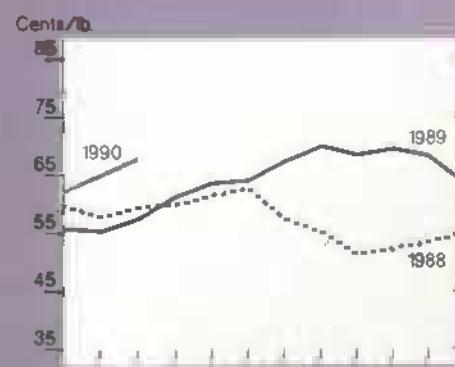
For further information, contact: Ken Nelson, coordinator; Fred White, cattle; Leland Southard, hogs; Lee Christensen and Larry Witucki, broilers, turkeys, and eggs; Sara Short and Jim Miller, dairy. All are at (202) 786-1285. AO

## Field Crops Overview

*According to the March Prospective Plantings report, farmers say they plan to boost food grain, oilseeds, and cotton planted area by 1 percent from last year. Feed grain acreage intentions show little changes from 1989. Soybean intentions are down 2 percent.*

*U.S. planting intention estimates are based on a voluntary USDA survey of about 75,000 farmers during March 1-15. Actual acreage planted can differ*

## Commodity Market Prices

**Choice steers, Omaha****Broilers, 12-city average****Com, Chicago<sup>3</sup>****Feeder cattle, Kansas City<sup>1</sup>****Eggs, New York<sup>2</sup>****Soybeans, Chicago<sup>4</sup>****Barrows and gilts, 7 markets****Rice (rough), SW Louisiana****Wheat, Kansas City<sup>5</sup>****All milk****Sorghum, Kansas City****Cotton, average spot market**

1500-700 lbs., medium no. 2. 2Grade A large 3No. 2 yellow. 4No. 1 yellow. 5No. 1 HRW.

## Agricultural Economy

### World, U.S. Wheat and Corn Stocks Continue Down

	1987/88	1988/89	1989/90
	Million metric tons		
<b>WORLD</b>			
Wheat			
Production	502	501	535
Use	531	531	539
Exports	105	97	98
Ending stocks	147	117	113
Corn			
Production	448	399	459
Use	463	459	478
Exports	57	65	71
Ending stocks	146	86	68
Soybeans			
Production	104	95	107
Use	103	97	104
Exports	30	24	27
Ending stocks	20	18	20
<b>UNITED STATES</b>			
Wheat			
Production	57	49	55
Use	30	27	28
Exports	43	39	35
Ending stocks	34	19	12
Corn			
Production	181	125	191
Use	153	133	149
Exports	44	52	58
Ending stocks	108	49	34
Soybeans			
Production	53	42	52
Use	35	31	32
Exports	22	14	17
Ending stocks	8	5	8

Notes: Exports of wheat and corn do not include intra-EC trade shipments. Data are for marketing years.

from intentions, depending on relative price changes, weather, and costs.

The U.S. and the USSR have recently agreed in principle on a new 5-year grain trade agreement that could take effect next year. The Soviets seem to be planning to purchase substantial amounts of wheat and coarse grains over the next several years.

### Farmers Shifting Into Corn

USDA's *Prospective Plantings* shows intended area for corn, barley, oats, and sorghum for 1990/91 at 106 million acres, unchanged from last year. However, the feed grain mix appears to be changing. The intended corn area is up 3.5 percent, but the intended area for other feed grains is down 8 percent.

Farmers said they plan to sow 74.8 million acres to corn. Some observers' estimates had run as high as 77 million acres. Among the major corn-producing states, Illinois (almost 11 million acres expected) and Iowa (12.6 million) show no change from the 1989/90 crop. In Nebraska, the third largest producer in terms of area, intentions are up about 4 percent to 7.8 million acres.

USDA's *Grain Stocks* report placed corn inventories on March 1 at slightly over 4.8 billion bushels, modestly lower than anticipated, implying that feed and residual disappearance was somewhat higher than expected during the first 6 months of the marketing year. Domestic use for the year now stands at almost 5.9 billion bushels and stocks at 1.3 billion, the lowest since 1983/84.

Modestly tighter corn stocks and increased use were bullish for corn prices, which had been falling in the days

prior to the report. Higher expected prices could mean lower farmer participation in government programs, and area planted to corn could rise, exceeding earlier intentions. Relatively soft soybean prices also have boosted corn's attractiveness to growers.

Planting intentions for all other feed grains are off for 1990/91. Farmers said they expect to plant only 11.5 million acres of sorghum, down almost 10 percent from a year earlier. The decline is scattered across most producing states, with the largest drops in Kansas and Texas, the top growers.

At 11 million acres, intended oats area is down about 1 million from last year. But, farmers said they plan to harvest only 6.35 million acres, off a little over 500,000 acres. Farmers said they will seed about 8.9 million acres of barley, compared with 9.2 in 1989/90.

### Spring Wheat Area Down

Prospective plantings of all wheat varieties in 1990/91 total 77.6 million acres, up only 1.2 percent from a year earlier. Some analysts had predicted a wheat area 1-3 million acres larger (see this issue's Commodity Spotlight). Indicated winter wheat plantings are 57.2 million acres, up nearly 4 percent from last year.

Kansas is the largest winter wheat producer, and the crop there appears to be doing well. Precipitation in late winter and early spring has been timely and adequate, and temperatures generally have been warm. Conditions in most other states are improving; western Nebraska, however, remains dry.

This year's increase in winter wheat seedings is likely to more than offset an indicated 12-percent decline in durum plantings, to only 3.35 million acres. Over 80 percent of all durum plantings last year were in North Dakota, where 1990 planting intentions are off 8 percent. Seeding intentions in Montana, the second ranking state, are off 26 percent this year (Montana acreage is less than one-tenth that of North Dakota).

## Agricultural Economy

However, reseeding of winterkilled wheat in Washington and Montana in 1989 boosted last year's spring wheat area, thus overstating this year's decline. Because of winterkill and drought, the ratio of harvested winter wheat land to planted was quite low last year.

Wheat stocks on March 1 were placed at 944 million bushels, about 30 million below most observers' estimates. However, with a large 1990 crop in prospect, the stocks report had less effect on wheat price projections than corn.

### **Soybean Intentions Off 2 Percent**

Farmers said they plan to plant 59.4 million acres of soybeans, about 2 percent below 1989, but somewhat larger than 1988. This figure was at the upper limit of analysts' expectations.

Farmers across the corn/soybean belt are trying to figure out how Brazil's economic reforms will influence U.S. futures prices. New-crop futures prices have softened as markets reacted to the big Southern Hemisphere crop now being harvested and also to the possibility of larger Brazilian plantings this fall. A lower anticipated price may cause U.S. growers to favor corn plantings over soybeans.

The decline in soybean intentions is spread across most Corn Belt states, with the largest slip in Indiana (150,000 acres). Kansas, not a major soybean state, may expand its planted area by 200,000 acres (up about 11 percent) and post the greatest absolute gain of all states. In the Southeast, declines are expected in all states except Kentucky.

### **Cotton Acreage To Jump**

Because of a sharp decline in cotton's Acreage Reduction Program requirements, U.S. cotton plantings may increase as much as 17 percent in 1990, making cotton expansion larger than that of any other major crop. However, the

12.4 million acres indicated for 1990 would be 1 percent below 1988. All but 300,000 acres would be upland cotton, a 19-percent increase from 1989.

In the Carolinas, Alabama, and Georgia combined, planting intentions are up sharply—19 percent. Upland growers across the Delta said they would plant 3.7 million acres, a 23-percent increase from 1989. Big gains also are expected in Texas and Oklahoma; planting has begun in both states and the crop outlook is favorable.

Intentions in Arizona and California are for over 1.5 million acres, 4 percent more than a year earlier.

### **Mixed Picture for U.S. Exports**

In 1989/90, corn export volume is forecast to be the highest since 1980/81, but wheat export tonnage will be down from last year. World wheat trade has changed little from last year, but the U.S. share is down because of this year's tight domestic supplies and increased competition. With supplies tight in the U.S. and Canada, EC exports will be close to last year's record 21 million tons.

At the end of 1989/90, EC wheat stocks are expected to exceed U.S. stocks for the first time. Three years ago, U.S. stocks were nearly three times those of the EC.

U.S. soybean exports are showing only a weak recovery from last year's drought-depressed level. Exports for 1989/90 are forecast to rise 16 percent to 16.6 million tons, but are still 24 percent below 1987/88. Soybean meal exports will fall nearly 10 percent. The fourth consecutive record harvest in South America is the major factor limiting U.S. exports.

Recent events in South America are adding uncertainty to the U.S. export forecast. Brazil's farmers are now harvesting the second largest crop ever. Normally, marketing would already be underway, and beans and meal would be starting to move into export channels.

However, uncertainties have resulted from the new government's foreign exchange policies, domestic currency policies, and price controls (recent devaluation, partial freeze on bank deposits, and other emergency measures).

The uncertainty could delay some marketings. This would strengthen trading prices and delay the seasonal slowdown in U.S. export shipments. But, significant interruptions in their sales this year would mean larger Brazilian supplies to sell in 1990/91.

U.S. cotton exports of 7.7 million bales will be the second biggest on record. Although area in the Southern Hemisphere has responded to this year's high prices, foreign exporter production is still down from last year. As of March 29, 7.9 million bales of U.S. cotton had been sold for delivery in 1989/90. Total sales for the year will depend heavily on how much China buys.

### **More Soviet Purchases Ahead**

The new U.S.-USSR Long-Term Grain Agreement is scheduled to be finalized and signed in the next few months. Terms are similar to past agreements. However, the maximum and minimum quantities are higher, and the agreement covers feed grains rather than just corn. The Soviets also will have somewhat more flexibility to adjust purchases than under the current agreement (see this issue's special article on the Soviet Union).

Specifically, the USSR would agree to purchase 10 million tons of grain annually from the U.S.—a minimum of 4 million each of wheat and feed grains, plus an additional 2 million combined of wheat, feed grains, soybeans, and soybean meal (each ton of soybeans and soybean meal would be counted as 2 tons of grain). In total, the annual minimum would be 1 million tons more than the current agreement, which expires at the end of 1990.

## Agricultural Economy

The Soviets will have greater flexibility in choosing between wheat and feed grains on a year-to-year basis. However, they must purchase a minimum of 20 million tons of each over the 5-year agreement period.

The new agreement reportedly will not take effect until next year, so it will have no immediate impact on Soviet purchases. Some recent Soviet statements have argued that the USSR should be more effective in procuring wheat from its own farmers and should cut back on imports.

But, the Soviets are also renewing long-term grain agreements with other suppliers, indicating that they plan to continue purchasing significant amounts of both wheat and feed grains.

During the current marketing year, the Soviets have purchased only 4 million tons of wheat from the U.S. Their wheat imports from all sources for 1989/90 (July/June) are expected to be only 14 million tons, the lowest since 1979/80.

However, as of April 5, they have already purchased 11.4 million tons of U.S. corn this marketing year. Large Soviet purchases are the major reason behind the surge in world corn trade this marketing year and last.

Despite the big volume of Soviet corn purchases to date, substantial additional buying will be needed to reach the forecast of 2.3 billion bushels (almost 58 million tons) for U.S. corn exports this marketing year. [Jim Cole (202) 786-1840 and Frederic Surls (202) 786-1826]

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For further information, contact: Sara Schwartz, world food grains; Edward Allen, domestic wheat; Janet Livezey, domestic rice; Pete Riley, world feed grains; Larry Van Meir and Allen Baker, domestic feed grains; Roger Hoskin, domestic oilseeds; Carolyn Whittton, world cotton; Scou Sanford, domestic cotton; Jim Schaub, domestic peanuts. World information (202) 786-1824; domestic (202) 786-1840. AO

## Specialty Crops Overview

*Global sugar consumption is expected to exceed production again in 1989/90, causing stocks to drop to their lowest since 1980/81. With stocks approaching 17 percent of use, world sugar prices will remain extremely sensitive to changes in production estimates. U.S. sugar production is 4 percent below last year, partly explaining the larger sugar import quota.*

*Processors expect to contract 8 percent more vegetable acreage in 1990. Demand for processed vegetables has been strong and stocks of some items are smaller than usual. U.S. dry bean and sweetpotato producers also indicate plans to expand area.*

*California will harvest a record navel orange crop in 1989/90 if the April forecast is realized. However, the total U.S. orange crop will be 19 percent below last year because of freeze losses in Florida and Texas. And the outlook for 1990/91 is for another small orange crop in Florida and Texas because of extensive weather damage to trees. Consequently, grower and retail orange prices are above a year earlier.*

### Sugar Market Tight

World sugar output for 1989/90 is forecast to be 3.3 million metric tons below consumption, prompting prices to climb as the market continues to tighten. Production is estimated at 105.2 million metric tons, compared with consumption of 108.5 million. Smaller-than-expected output in the U.S., Mexico, Cuba, and Thailand has lowered the December 1989 production estimate by 500,000 metric tons.

By the end of 1989/90 (September/August), world sugar stocks are

expected to be 18.5 million tons, approximately 17.1 percent of consumption. With the stocks-to-use ratio this low, unfavorable growing conditions in any major sugar producing country could cause short-term, but dramatic, price escalation.

World sugar prices (f.o.b. Caribbean contract no. 11) were over 15 cents a pound by the beginning of April, more than 20 percent above a year earlier. Prices averaged 15.4 cents in March, up from 14.6 in February. Unusually large purchases by Mexico and Pakistan and higher U.S. import quotas helped boost prices.

U.S. sugar production for crop year 1989/90 (September/August) is estimated at 6.6 million short tons (raw value), 4 percent below last year and nearly 10 percent below 1987/88.

Cane sugar output is down 8 percent from 1988/89, because of freeze losses in Florida and Texas and unusually wet harvesting conditions in Hawaii. Beet sugar production declined only slightly. Sugarbeet yields and sucrose content were lower than expected in 1989.

Lower U.S. production prospects, coupled with rising domestic consumption, led to an increase in the U.S. sugar import quota to about 1.6 million short tons on an annual basis. This is roughly 31 percent above the initial quota set in December 1988. The estimate of U.S. consumption for 1989/90 rose 25,000 short tons in March because of larger-than-expected deliveries. The quota for calendar 1988 was 1 million tons.

Sugarbeet growers indicated they will plant 4.7 percent more beet area in 1990 than last year. At 1.4 million acres, planted acreage would be the highest since 1976.

Growers in the Red River Valley (North Dakota and Minnesota) indicate a 5-percent expansion in sugarbeet area, to 549,000 acres. Dry conditions have persisted in the valley, where droughts have

## Agricultural Economy

cut yields for the last two seasons. Subsoil moisture reserves remain depleted, so some of the acreage may have been added to compensate for lower expected yields.

### Bigger Vegetable Area Planned

Processors of the five major vegetable crops (green peas, snap beans, sweet corn, tomatoes, and cucumbers for pickles) expect to contract 8 percent more acreage in 1990. Strong demand and modest stocks of canned tomatoes and green peas influenced processors to contract additional acreage.

Intended plantings for each of the five crops are up from last year, the smallest increase being a 1-percent rise each in snap beans and pickling cucumbers. Snap bean stocks and shipments through much of 1989 were above a year earlier. Wholesale prices for canned and frozen snap beans sagged during the fourth quarter.

Expected plantings of sweet corn are up 9 percent, with the biggest increase in acreage for freezing. Wholesale prices have been strong for much of 1989/90 despite larger stocks. Export demand for canned and frozen sweet corn has sustained prices. Japan is the largest export market for U.S. processed sweet corn.

Canning tomato acreage may be up 10 percent, and tomato tonnage is slated for a 17-percent increase. Stocks of 1989-pack peeled tomatoes are reportedly down, although authoritative stock and shipment figures for canned tomato products are no longer available. Prices were firm during the first quarter of 1990.

The bulk of the additional production likely will be used for tomato paste, because most new processing capacity in

California is for paste production. Continued growth in the fast-food industry has created additional demand for tomato paste, and prices remained firm during the first 3 months of 1990. Tomato paste imports fell 10 percent in 1989, in part reflecting tighter world supplies.

Green pea area will gain 12 percent from last year. Canned and frozen stocks are low, and wholesale prices have been firm. Processors will try to build reserves this summer.

### More Dry Beans & Sweetpotatoes

Dry bean producers indicate plans to expand acreage 11 percent from 1989. Robust export sales have kept prices firm for the 1989 crop despite a 26-percent increase in output from the drought-stricken 1988 crop.

With the 1990 harvest commencing in foreign countries, it is questionable how long U.S. prices will hold. South Africa is reported to have large quantities of red and yellow speckled beans, which are used in place of pinto beans in Brazil, Mexico, and the Dominican Republic.

In the U.S., the largest bean area increase—80,000 acres—is planned in North Dakota, a major producer of navy and pinto beans. In California, a 38,000-acre decline may reflect growers diverting short water supplies to higher value crops.

Sweetpotato growers indicated they would raise planted area 5 percent this year. Six percent more sweetpotato acreage is expected in North Carolina and 11 percent more in Louisiana, the two largest producing states.

### Orange Prospects Edge Up

The forecast for 1989/90 U.S. orange production was raised 2 percent in March,

because of a better-than-expected recovery from Florida's freeze-damaged crop, and remained unchanged in April. But even if this forecast is realized, the crop still will be 19 percent smaller than last season.

Because of the shortage of fresh market quality oranges this year, Florida's shipments were essentially completed by mid-February. This season's tight fresh orange market in the Eastern states is helping California growers sell their record navel orange crop.

The April forecast of the California navel crop was 1.54 million short tons, 21 percent larger than in 1988/89 and 2 percent above the 1982/83 record. Nevertheless, in March, on-tree prices for California fresh navels averaged \$6.74 per box, 3 percent above a year earlier. Toward the end of the navel season, the early California valencia harvest may push navel prices down.

The outlook is for another small orange crop in Florida and Texas in 1990/91. Extensive freeze damage to trees in Texas may mean growers will not even harvest a commercial crop next year. Exceptionally dry weather in Florida has hampered tree recovery and caused some loss of bloom this spring.

For grapefruit, short supplies from Florida and Texas and substantially higher prices portend a good season for California and Arizona growers. In April, grapefruit production in California's desert region was forecast to reach 118,000 short tons, up 5 percent from a year earlier. Arizona's crop was placed at 64,000 short tons, up 2 percent.

While California and Arizona growers reportedly are delaying picking in order to obtain larger sizes, prices there are significantly above 1988/89 and may move higher as Florida's supplies diminish.

## Commodity Spotlight

### Fruit Prices Higher

In March, the index of grower prices for fresh and processing fruit stood at 184 (1977 equals 100), up marginally from December 1989 and up 6 percent from a year earlier. Higher prices for grapefruit, lemons, strawberries, and pears more than offset lower orange and apple prices.

The heavier volume of freeze-damaged oranges diverted to the lower paying processing market has curbed orange prices so far this year. A larger 1989 apple crop also dampened growers' prices.

Retail prices for fresh fruit in February were 10 percent higher than in December 1989 and 14 percent higher than a year earlier. The index of consumer prices (CPI) was higher for bananas, oranges, and a composite group of other fruits, while apple prices were lower.

The fresh fruit CPI likely will remain above last year through spring. Demand is strong for fresh citrus, and fresh apple and pear stocks in regular- and controlled-atmosphere storage are smaller than a year ago. [Glenn Zepp (202) 786-1883]

**For further information, contact:** Kate Buckley, fruit; Shannon Hamm, vegetables; Peter Buzzanell, sweeteners; Verner Grise, tobacco; Doyle Johnson, tree nuts and greenhouse/nursery; David Harvey, aquaculture. All are at (202) 786-1883. **AO**

### Wheat Prices Bearish

**A**t the beginning of March, wheat stocks totaled 944 million bushels, the lowest in over 15 years. But, the tight supplies are not sustaining prices.

The wheat price received by farmers fell 9 cents per bushel in January and 15 cents in February, and the preliminary March price showed an additional 14-cent drop—down 10 percent for the 3 months together. Wheat futures prices also declined. The bearish price moves reflect improved crop conditions and only modest prospects for near-term demand growth.

Thin wheat stocks after three quarters of the marketing year (June-May) will mean low fourth-quarter supplies. The early March stocks were below the average of trade expectations by about 30 million bushels, or 3 percent.

While the stocks report was in line with previous reports, it disappointed those who had looked for a "discovery" of wheat in transit and thus not counted. Nevertheless, the lower-than-expected stocks failed to spark a major increase in wheat prices.

March-May wheat supplies of 949 million bushels are more than big enough to meet expected use. Even with 275 million bushels tied up in the Farmer-Owned Reserve (FOR) and CCC inventory, about 670 million bushels of free stocks remain to cover forecast use of 507 million bushels for the 3 months.

The real question about adequate supplies is for 1990/91. After 4 years of stock drawdowns, there is very little room for further stock declines. But, a combination of several factors is making market players think that wheat stocks will increase in 1990/91.



### New-Crop Prospects Improving

The winter wheat area planted was up only 3.8 percent. This was a smaller increase than many had expected, despite several inducements to expand acreage this season.

The Acreage Reduction Program (ARP) requirement was reduced from 10 percent last year to only 5 this year. Also, to encourage additional planting, USDA offered participating wheat farmers modified contracts, allowing them to harvest up to 105 percent of their wheat base, if they were willing to forgo a portion of their deficiency payments.

And, wheat prices were high during the planting season, especially when compared with competing crops. Yet all these incentives resulted in an area increase of less than 4 percent.

Although the modified contract looked profitable on paper, it was not announced until the end of September, and many winter wheat farmers had already planned or even started their plantings. Moreover, wheat area continues to be constrained by the Conservation Reserve Program (CRP).

Despite favorable prices, more wheat base has moved into the CRP than any other crop. During the latest signup, 1.1

## Commodity Spotlight

million wheat base acres entered the CRP. A total of 10.3 million acres of wheat base is now tied up in the CRP, accounting for 11 percent of all wheat base. Although not the highest yielding acres, this land still represents a significant reduction in the nation's capacity to produce wheat.

Early in the growing season, weather problems created uncertainty about winter wheat prospects. November was a record-dry month across much of the Southern Plains winter wheat area. Pre-planting moisture allowed good emergence, but the dry November retarded growth.

Around Christmas, the weakened plants were subjected to potentially damaging low temperatures. However, temperatures before the bitter cold also were below normal, and the wheat was dormant. Moreover, snow accompanied the cold over most areas, providing protection and moisture.

Growing conditions became much more favorable in January-March. Mild winter temperatures and above-normal rainfall provided excellent conditions for growth as the wheat emerged from dormancy.

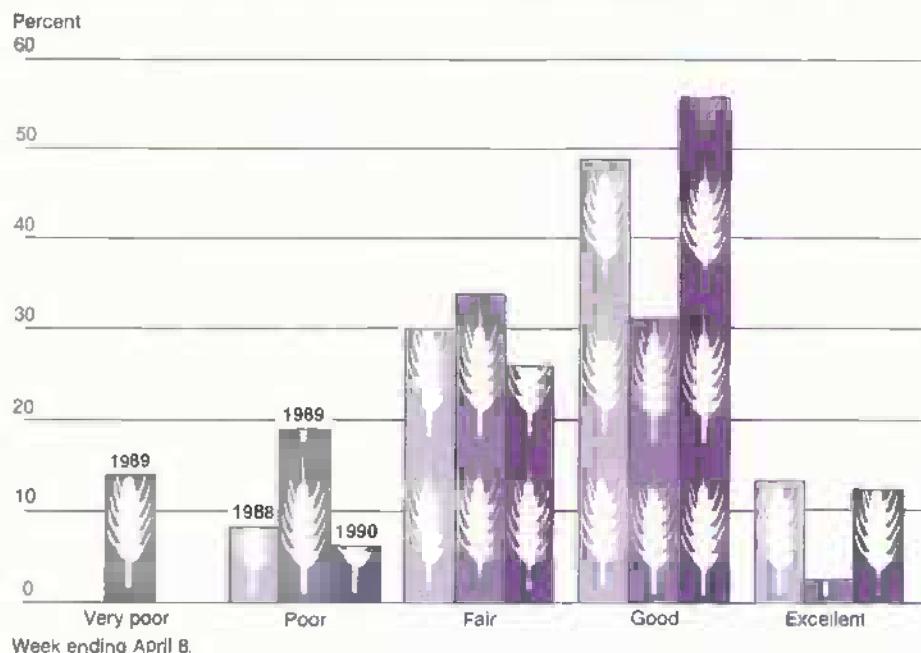
As of late March, the first assessment of overall conditions indicated that the crop was in much better shape than a year earlier. In some areas, especially Texas, early-season problems have left the crop in worse-than-average condition. But in other areas, such as Oklahoma, conditions are much better than average.

Crop conditions can change quickly, particularly early in the growing season. Although conditions currently look favorable, the crop is a long way from being in the bin. Bad weather, disease, or insects can still reduce yields. However, the crop has come through the winter in good shape.

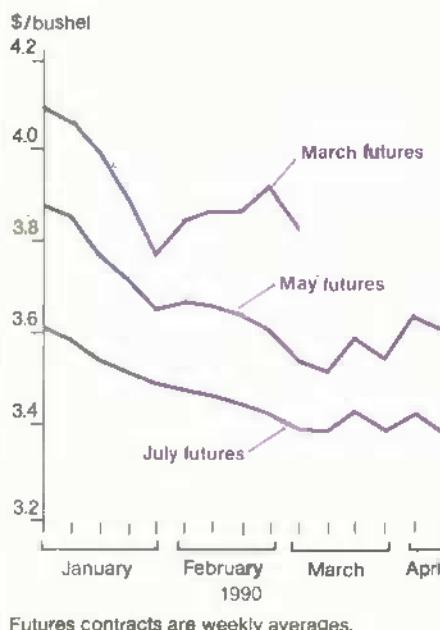
### **Higher Output?**

Based on winter wheat seedings and farmers' spring wheat planting intentions, total wheat area planted for 1990/91 could be 77.6 million acres, up only 1.2 percent. However, last year's planted acreage was artificially large

#### Most Winter Wheat This Year In Good or Excellent Condition



#### Wheat Futures Still Falling Despite Low Stocks



because extensive areas in Washington and Montana were counted twice—once when planted to winter wheat, and again when reseeded to spring wheat after winterkill.

This year, the increase in harvested area probably will be much greater than the gain in area planted, because winterkill was less. The lower ARP and modified

contracts also could encourage farmers to harvest a larger portion of the planted area, especially if crop conditions remain favorable.

U.S. average wheat yields for the last 4 or 5 years have been below the earlier trend of 38 to 39 bushels per acre. With average abandonment and trend yields, the U.S. could produce a crop considerably larger than the 2 billion bushels in 1989, perhaps allowing for some stock rebuilding.

Winter wheat growing conditions have been generally favorable not only in the U.S., but across much of the Northern Hemisphere. Intense competition from the EC is probable if the Northern Hemisphere crops continue their favorable progress. In addition, Canadian planting intentions point to a bigger wheat area there.

### **Market Signals Shift Demand**

The futures market has priced wheat for 1989/90 (old crop) above new-crop 1990/91 wheat. Prospects for increased U.S. production and strong export competition in 1990/91 are keeping a lid on new-crop prices.

## Commodity Spotlight

### U.S. Wheat: Tighter Stocks, Lower Exports<sup>1</sup>

Item	1988/89	1989/90
Million bushels		
Stocks, June 1	1,261	702
Production	1,812	2,036
Imports	9	6
Total supply	3,082	2,743
Use, June-Aug.	828	826
Domestic	467	456
Exports	362	370
Stocks, Sept. 1	2,254	1,917
Imports	6	5
Total supply	2,260	1,922
Use, Sept.-Nov.	544	499
Domestic	215	170
Exports	329	329
Stocks, Dec. 1	1,716	1,424
Imports	4	5
Total supply	1,720	1,429
Use, Dec.-Feb.	492	484
Domestic	131	204
Exports	361	280
Stocks, March 1	1,228	944
Imports	4	5**
Total supply	1,232	949**
Use, March-May	530	507**
Domestic	162	211**
Exports	368	296**
Stocks, June 1	702	442**

<sup>1</sup>June-May marketing year. \*\*Forecast.

The March futures contract expired with about a 46-cent premium over the May contract. An inverse price relationship, where the market does not cover any portion of the storage costs or interest payments for holding wheat, is common as harvest approaches, but this year it is unusually large.

The strong inverse in the futures market is a signal to people holding wheat that it is worth more now than it will be later, and they should sell. However, it is also a signal to wheat buyers that wheat will be cheaper later, and if they can get by without purchasing for delivery right away, they should delay. This dampens current demand.

The market can use the large inverse in futures to allocate scarce supplies during the last months of 1989/90, while actu-

ally holding down prices. This is especially true if new-crop output is likely to be ample.

Some of the short-term rationing effect of the price inverse is offset by the Export Enhancement Program (EEP). In order to compete with the EC until the new crop is available, EEP bonuses for old-crop sales have been higher.

For example, EEP bonuses for sales to China for January through May delivery were \$10-\$20 per ton, whereas bonuses for new-crop wheat averaged under \$6. This has kept some U.S. buyers from feeling the full effect of the price inverse. *(Edward Allen (202) 786-1840) AO*

## Mexico May Buy More U.S. Wheat

Results of an econometric model indicate that Mexican wheat imports by the year 2000 could increase threefold, to 2.2 million tons. Imports averaged .7 million tons during 1986-88. In Mexico, changes in economic policies, forecast slower wheat production growth, and an expected recovery in economic activity are behind the long-run import prospects.

These factors, plus expected population growth and assumed world and domestic price changes, are formalized into a wheat projection model that shows strong growth in Mexican wheat imports during the 1990's.

The U.S. likely would capture most of the Mexican wheat market, assuming the import demand is for food wheat. Mexico has been one of the largest U.S. wheat markets in Latin America, although trade volume has been erratic. The U.S. share dropped sharply during 1983-86, when Mexico imported mostly feed wheat.

### Policy, Slow Growth Limit Imports

Per capita wheat demand in Mexico declined during the 1980's, largely in response to slow economic growth. Since 1982, the economy has been weakened by large public debt payments, reduced petroleum revenues, rising inflation and interest rates, falling real wages, and high unemployment.

Real economic growth averaged only 1.2 percent per year during 1982-88, compared with 7 percent during the oil-boom years of the 1970's.

In addition, government policies in the 1970's and early 1980's limited Mexican wheat imports. Wheat growers were protected by traditional import substitution

## World Agriculture and Trade



programs that restricted imports through tariff and nontariff barriers. At the same time, farm incomes were supported by price guarantees and subsidized input prices. Retail wheat prices had been subsidized, despite drops in consumption.

Faced with slow economic growth and the rising cost of servicing large domestic and foreign debts during the 1980's, the Mexican government changed direction. The emphasis currently is on trade liberalization, deregulation of domestic markets, and other policies to reduce budget and balance-of-payment deficits.

### **Liberalization Is Critical**

Following the 1982 financial crisis, the Mexican government began to enact a series of reforms to liberalize its economy. By the mid-1980's, consumer subsidies and price controls were gradually being lifted and producer price supports and input price subsidies were being phased out.

Import tariffs were dramatically reduced and other restrictive trade practices eliminated during 1986-87. However, some agricultural commodities, including wheat, remain under import license control.

Mexico's gradual liberalization of trade and price policy is expected to result in

greater transmission of world commodity prices into the domestic market. The elimination of nontariff barriers should eventually lower domestic producer prices for wheat closer to world trading prices, which are expected to continue their historic downward trend during the 1990's.

Farm input subsidies, including energy and transportation fees, are expected to be eliminated. The resulting higher costs of production could limit the expansion of wheat area, because of relatively intensive use of inputs on wheat in Mexico. Limits on the remaining potential of green-revolution technology and irrigation also imply a slowdown in the growth of wheat yields.

### **Economic Growth Prospects Good**

Increased domestic wheat demand will largely depend on Mexico's economic recovery, which in turn is linked to international developments. In this regard, foreign debt negotiations are assumed to reduce the country's debt-servicing obligations during the 1990's.

In addition, real oil prices are assumed to rise during the 1990's. In the long run, Mexican economic growth is forecast to

pick up as the trade balance improves, foreign exchange reserves rise, and the climate for private and foreign investment improves.

If these assumptions are accurate, the Mexican economy should recover by the mid-1990's. During the second half of the decade, real income growth is projected to average 5-6 percent annually. This would stimulate consumer demand for wheat, as well as for other foods. However, growth in demand could be significantly weaker than this if real oil prices fall or debt rescheduling is unsuccessful.

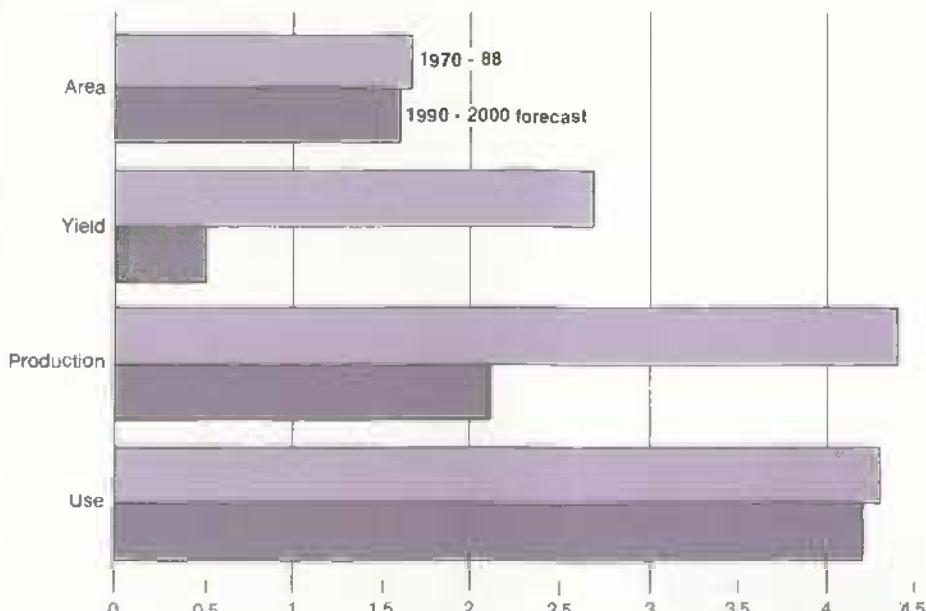
Consumer subsidies and price controls likely will be gradually removed. The current anti-inflation program, which froze bread and flour prices during 1988-89, is expected to be phased out this year, so deregulation probably will resume. Together, these measures suggest that domestic consumer prices for wheat will rise initially and then become more aligned with the downward trend in real world prices.

### **Demand To Top Output**

Mexican wheat consumption is projected to rise 4.2 percent annually, to 6.7 million tons by 2000. This growth is

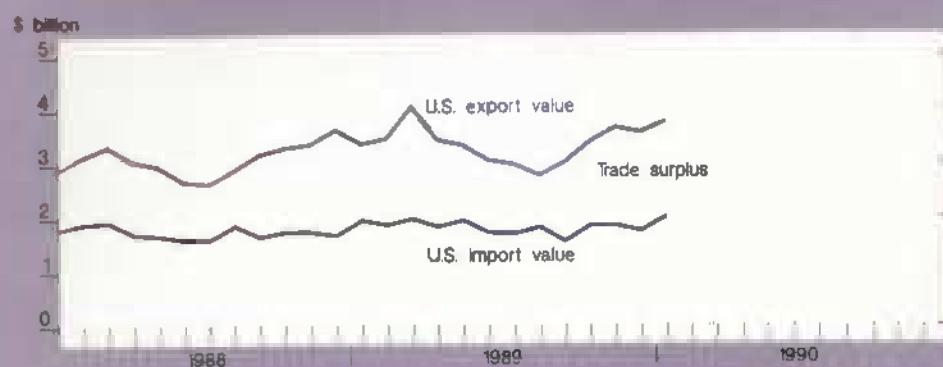
#### **Mexican Wheat Yields & Output Will Grow More Slowly In 1990's**

Percent growth (compound)

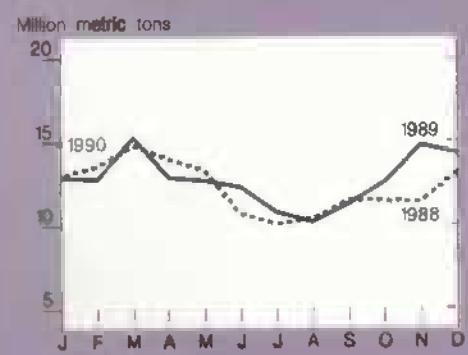


## U.S. Agricultural Trade Indicators

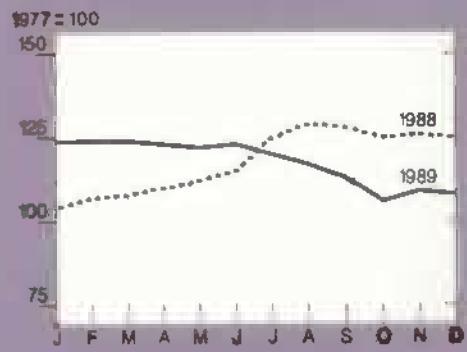
**U.S. agricultural trade balance**



**Export volume**



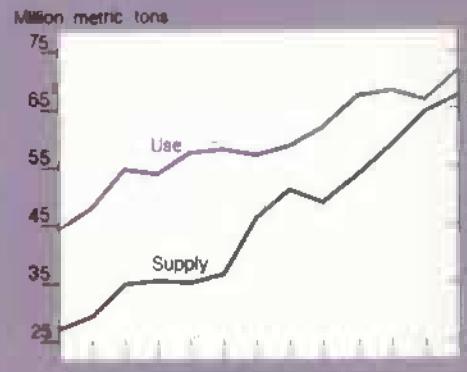
**Index of export prices**



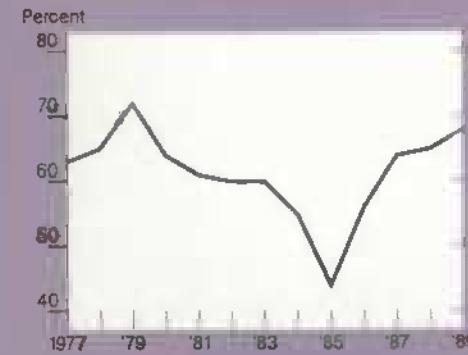
**Foreign supply & use of coarse grains**



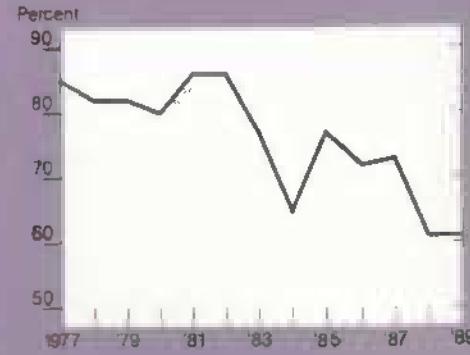
**Foreign supply & use of soybeans**



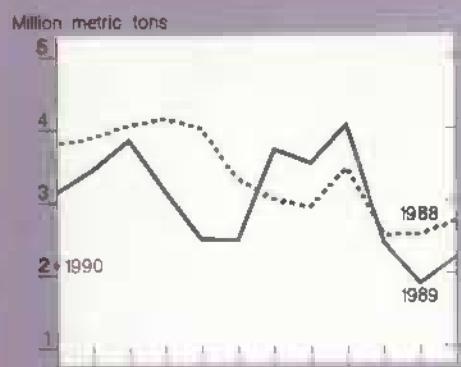
**U.S. share of world coarse grains exports<sup>1,2</sup>**



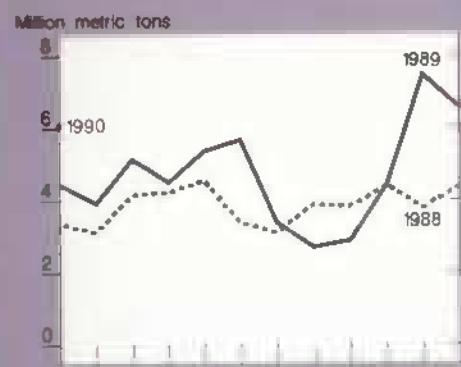
**U.S. share of world soybean exports<sup>1,2</sup>**



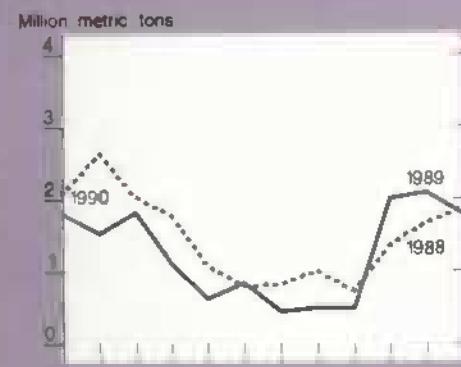
**U.S. wheat exports**



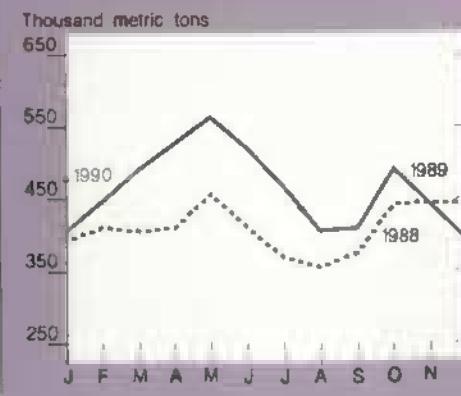
**U.S. corn exports**



**U.S. soybean exports**



**U.S. fruit & vegetable exports<sup>3</sup>**



<sup>1</sup>Excluding intra-EC trade    <sup>2</sup>October-September years

<sup>3</sup>Includes fruit juices.

## World Agriculture and Trade

sharply higher than the 2.9-percent annual rise of the 1980's, but consistent with the 1970-88 growth rate of 4.3 percent.

The model forecasts that by the mid-1990's, per capita wheat consumption will regain the peak achieved in the mid-1980's (58 kilos) and then increase even further through 2000. The demand projections are driven primarily by the expected economic recovery and the consequent growth in real per capita incomes. Total wheat consumption gets a boost from projected population growth, which is estimated to average 2.1 percent during 1990-2000.

For wheat production growth, in contrast to demand, the model shows a significant slowdown during the 1990's compared with the last 20 years. Mexican output is projected to grow at an annual compound rate of 2.1 percent during the 1990's, compared with 4.4 percent annual growth during 1970-88.

This translates into production of 4.4 million tons by 2000, compared with 3.6 million annually during the late 1980's. Yet the projected output level is short of the record 4.5 million in 1986, and primarily reflects the expected slower growth in yields, assuming no unusual technological breakthroughs.

With projected consumption growth outstripping production gains, the results indicate a sharp rise in Mexican import demand during 1990-2000. The steady growth in import demand shown in the projections assumes no abnormal weather. In reality, weather-induced variations in production likely will make annual import demand more unstable than projected by the model.

These model projections look favorable for U.S. wheat exports to Mexico. The U.S. likely would continue to have an export edge, partly based on its geographic advantage, in a freer Mexican market. However, the U.S. also could encounter stiff competition from other wheat suppliers, primarily Argentina and Canada. [Myles J. Mielke  
(202) 786-1823] AO

## Canada Insulates Broiler Prices

**B**efore Canada completed implementing its broiler supply management program in 1979, U.S. broiler-price changes had larger and more direct effects on Canadian broiler prices than they do now. Since 1979, Canada has regulated domestic production and restricted imports.

Two statistical models show how Canadian policies have sharply cut the transmission of cross-border price changes and thus impeded broiler trade between the two countries.

Under the U.S.-Canada Free Trade Agreement (FTA), Canada is loosening its broiler import quota. And, world agricultural trade may be liberalized further, given the market-oriented proposals of the U.S. and the Cairns Group being discussed as the GATT Uruguay Round nears conclusion.

As a more liberalized trading environment emerges, Canadian broiler prices may again become more responsive to changes in U.S. prices, because U.S. broilers will flow more freely to Canada.

At the provincial level, Canada manages broiler supply through the horizontal integration of individual producers into marketing boards. The provincial marketing boards assign marketing quotas to each producer; the quota depends on such factors as production density and available barn space.

For international trade, an import quota, loosened by the FTA from 6.3 to 7.5 percent of the previous year's production, is enforced by Canada's Department of External Affairs. Under special circumstances, such as when local broilers cannot be found within 72 hours, supplementary imports are permitted.

These measures were instituted in part to stabilize Canadian farm and retail broiler prices by shielding them from U.S.

broiler price volatility. The models show that since 1979, Canadian broiler prices have indeed been well insulated from the influences of broiler price fluctuations in the U.S.

Since 1979, the effect of a U.S. farm price shock has been cut from 6 months' duration to 1 on the Canadian farm price, and from 10 months' duration to 6 on the Canadian retail price. Moreover, the influence of U.S. retail broiler price movements—on either Canadian farm or retail prices—has been virtually wiped out.

### Price Effects Delayed & Dampened

These results come from two monthly, nonstructural statistical models called vector autoregression (VAR) models, set up for periods before and after the 1979 Canadian broiler program.

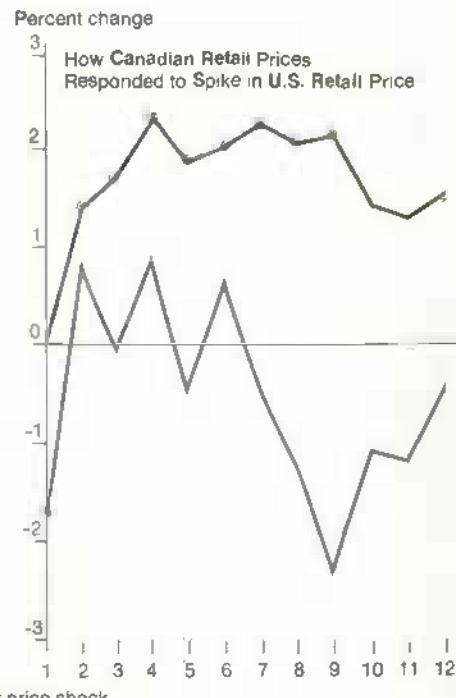
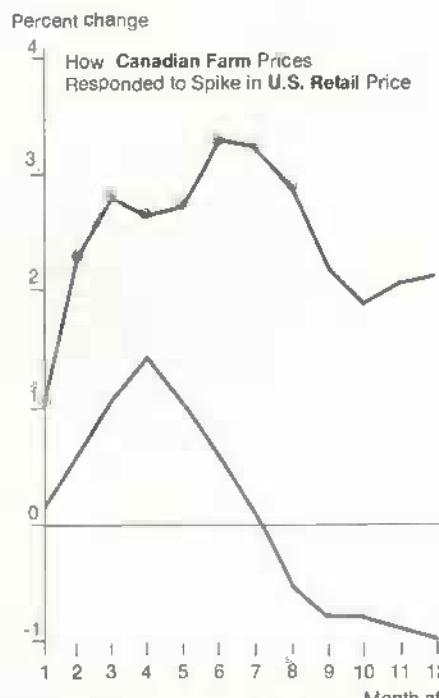
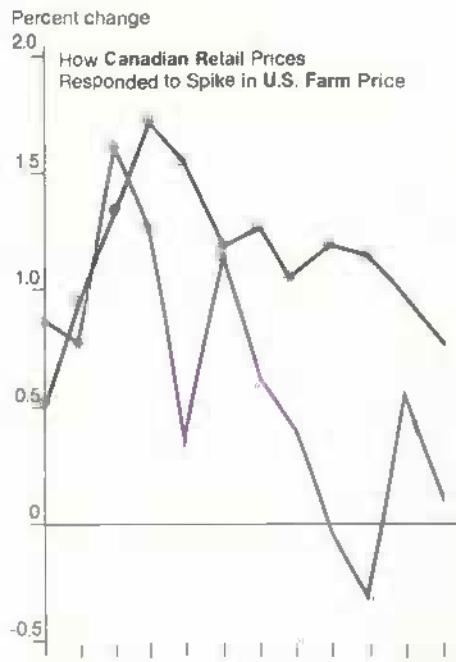
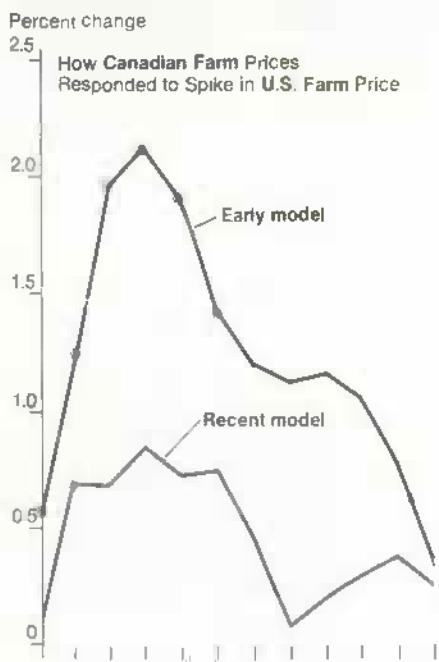
An early model was estimated for 1967-78 and a recent model for 1980-87. Each model was shocked twice: with a one-time 10-percent rise in the U.S. farm broiler price and a one-time 10-percent rise in the U.S. retail broiler price. In the four accompanying graphs, the statistically significant (non-zero) Canadian price responses are circled.

Before Canada's 1979 broiler measures, Canadian farm prices responded immediately and for about half a year to a 10-percent increase in U.S. farm prices. Today, the Canadian farm price response is considerably delayed and dampened. Compared with the early period, the Canadian farm price takes an additional month to respond, and then reacts for only a month.

Similarly, a U.S. farm price jump of 10 percent, before 1979, would have generated in Canada's retail price immediate rises that persisted for almost a year. Today, the Canadian retail price responds to a U.S. farm price increase for only about half as long. So, Canadian

## World Agriculture and Trade

### Canadian Policies Have Dampened Broiler Price Responses to U.S. Broiler Price Movement\*



\* = response that is statistically nonzero at 5-percent significance level.

\*10-percent spike in U.S. broiler price.

broiler supply management has almost halved the period of retail price increases from U.S. farm price shocks.

Before 1979, Canada's farm broiler price would rise immediately and go on climbing for 8 months following a 10-percent jump in the U.S. retail broiler price. But, the link between U.S. retail price increases and Canadian farm prices has been virtually eliminated; none of the Canadian farm price impulses was statistically significant.

Formerly, Canada's retail broiler price would take a month to respond, and then increase for 8 months, given a 10-percent uptick in the U.S. retail price. Since 1979, this link also seems to have virtually vanished.

### About the Models

The following data, supplied by the U.S. Bureau of Labor Statistics, were used: for the U.S. farm broiler price, the PPI for broilers and fryers (within the farm products index group); for the U.S. retail broiler price, the consumer price index of all urban consumers for fresh whole chicken.

Statistics Canada provided the Canadian farm price and the retail price indices for broilers. All prices were converted to deflated Canadian dollars.

All analyses accounted for seasonal effects and time-dependent influences.  
*[Ronald A. Babula (202) 786-1785 and Robert F. J. Romain (418) 656-7946] AO*

## World Agriculture and Trade

# Food Deficits Still Big

**U.S.** Public Law 480, the "Food for Peace" legislation, has multiple objectives and, correspondingly, is important both to numerous developing countries and to U.S. farmers and agribusinesses. The legislation benefits the recipient countries and also provides a way to help manage U.S. agricultural surpluses.

## Cereal Deficits: Sub-Saharan Situation Worsens

	Status quo deficit Million tons	Nutrition deficit
Total	17.1	34.4
Africa	8.7	14.9
North	4.8	2.5
Sub-Sahara	3.9	12.4
West	0.9	2.5
East	1.4	6.7
South	1.7	3.2
Asia	5.5	14.4
South	4.5	13.3
Southeast	1.0	1.1
Latin America	2.7	3.5
Caribbean	0.8	0.8
Central	0.7	1.0
South	1.3	1.7
Total	17.0	32.7
Africa	8.7	15.1
North	3.2	0.9
Sub-Sahara	5.5	14.2
West	0.9	2.6
East	2.9	8.1
South	1.7	3.5
Asia	4.7	12.0
South	3.7	11.1
Southeast	1.0	0.9
Latin America	2.7	3.4
Caribbean	0.7	0.7
Central	0.7	1.0
South	1.3	1.7
Total	16.2	30.5

Nonetheless, food deficits in many developing countries have grown despite decades of assistance. Moreover, U.S. stocks currently are low, grain prices are up, and funds for assistance have declined. What will the consequences be for food-deficit countries, and what are the implications for U.S. food aid?

The appearance of a well publicized famine likely would give rise to the requisite emergency food aid. But if aid budgets continue to be tightened, chronic recipients of food assistance will be financially stressed by the necessity to import at commercial prices.

For about 50 developing countries, USDA has quantified shortfalls from the recent status quo food supplies and also from minimum per capita caloric requirements. These shortfalls are called, respectively, status quo and nutrition-based food deficits.

The status quo deficits represent estimated shortfalls from average national per capita availabilities in recent years. The nutrition-based deficits represent estimated shortfalls from minimum caloric requirements recommended by the UN Food and Agricultural Organization

## Developing Countries Ranked by Per Capita Food Deficits, 1989/90

Rank	Status quo deficit \$ U.S.	Nutrition deficit \$ U.S.	
1. Cape Verde	90.03	Rwanda	109.84
2. Jamaica	86.82	Sierra Leone	81.64
3. Tunisia	78.17	Jamaica	67.53
4. Costa Rica	62.64	Cape Verde	60.02
5. Liberia	40.44	Mozambique	50.33
6. Swaziland	39.32	Lesotho	49.58
7. Lesotho	35.86	Bolivia	47.85
8. Egypt	33.58	Tunisia	45.71
9. Malawi	33.06	Malawi	45.49
10. Afghanistan	29.13	Haiti	44.70
11. Mauritania	28.75	Costa Rica	44.55
12. Sri Lanka	27.37	Honduras	43.56
13. Honduras	26.45	Guinea	39.48
14. Bolivia	24.93	Liberia	38.07
15. Haiti	24.74	Somalia	36.91
16. Nicaragua	23.70	Niger	33.37
17. Peru	23.66	Ethiopia	30.91
18. Sierra Leone	22.88	Chad	30.62
19. Somalia	21.31	Peru	28.23
20. Mozambique	18.58	El Salvador	26.72
21. Angola	18.32	Kenya	24.71
22. El Salvador	18.23	Togo	24.59
23. Dominican Repub.	16.81	Sri Lanka	24.37
24. Rwanda	9.78	Mauritania	21.56
25. Madagascar	9.74	Dominican Repub.	20.17
26. Guatemala	9.65	Guatemala	19.29
27. Togo	9.62	Nepal	17.76
28. Guinea	9.53	Angola	17.50
29. Senegal	8.99	Egypt	16.75
30. Central Afr. Rep.	7.37	Benin	15.97
31. Gambia	5.96	Afghanistan	15.85
32. Bangladesh	5.88	Bangladesh	14.20
33. Chad	5.48	Ghana	14.02
34. Ethiopia	5.09	Zambia	13.59
35. Guinea-Bissau	4.95	Madagascar	12.92
36. Zaire	4.77	Senegal	12.48
37. Benin	4.62	Sudan	12.11
38. Pakistan	3.88	Nicaragua	11.06
39. Ghana	3.80	Central Afr. Rep.	7.37
40. Kenya	3.19	Zaire	6.02
41. Niger	2.71	Mali	4.36
42. Tanzania	1.86	Palau	3.48
43. Nepal	0.73	Philippines	3.32
44. Indonesia	0.02	India	3.00
45. Uganda	0.00	Burkina Faso	0.91

## World Agriculture and Trade

(FAO) and the World Health Organization (WHO).

Deficits take into account estimates of local production and the country's ability to pay for commercial imports. Both types of deficit calculations include an adjustment either to increase or to draw down stocks, maintaining historical stocks-to-use relationships.

### **Sub-Saharan Is Trouble Spot**

Continued relatively favorable weather in food-deficit countries has brought them large gains in agricultural production. Still, for 1989/90, the global cereal shortfall from historical consumption is an estimated 17 million tons, about the same as a year earlier.

Rising cereal prices on world markets, poor export earnings, and continued debt-service requirements, among other factors, are limiting the developing countries' ability to pay for imports. Wheat prices continue strong relative to the mid-1980's because of tight exporter supplies in view of demand.

For Sub-Saharan Africa, the status quo cereals shortfall is estimated to be 3.9 million tons, up 600,000 tons from 1988/89. The greatest shortfalls are in countries with major civil conflicts: Ethiopia, Angola, and Mozambique. The estimated cost of imports to make up the deficit in just these three countries is \$340 million.

In Asia, the status quo cereals deficit is 5.5 million tons, compared with 6.9 million in 1988/89. Computed cereals import requirements are down sharply in Indonesia and Pakistan, reducing the shortfall in the region. Import requirements dropped in all Asian countries except Afghanistan and Sri Lanka. India continues to have no cereals deficit, but a deteriorating financial situation boosted the Bangladesh deficit to 2 million tons.

In Latin America, on the other hand, cereal production has declined and import requirements have risen. With only marginal increases in the ability to pay for imports, the cereals deficit from

### **Chad, Haiti, Mozambique, Mali Most Often Experience Food Deficits**

	1989- population (1,000)	-- Status quo deficit --			-- Nutrition deficit --		
		82-85	86-89	82-89	82-85	86-89	82-89
Annual frequencies of deficits							
Cape Verde	364	3	3	6	2	0	2
Somalia	8,248	3	0	3	3	1	4
Swaziland	756	4	2	6	1	0	1
Lesotho	1,711	3	1	4	0	1	1
Mauretania	1,977	3	1	4	3	1	4
Jamaica	2,485	3	2	5	1	2	3
Chad	4,914	3	1	4	4	2	6
Tunisia	7,916	0	3	3	0	1	1
Egypt	54,778	2	4	6	0	0	0
Haiti	6,403	1	3	4	3	2	5
Libera	2,544	1	4	5	0	1	1
Rwanda	7,322	1	0	1	0	3	3
Mozambique	15,376	0	2	2	1	4	5
Mali	8,918	0	0	0	4	1	5
Total		27	26	53	22	19	41

Note: Includes countries that rank among the top eight for both status quo and nutrition based deficits with a frequency of 3 years or more in any 4-year period.

the region's status quo is 2.7 million tons, up 400,000 from 1988/89.

The nutrition-based shortfall for 1989/90 is down sharply in Asia, eased by rebounding crops. But these declines are offset worldwide by problems in Africa. The nutritional deficit is up sharply in Egypt, the Sudan, and Ethiopia. The nutritional deficit in Latin America increased by nearly 400,000 tons, led by Bolivia and Guatemala.

A number of the forces underpinning food deficits are short term. Assuming 1990/91 country production to be on trend and world wheat priced at \$150 per ton, status quo cereals deficits will be down about 1 million tons from 1989/90. On the same basis, the global nutritional deficit is projected to be down 2 million tons in 1990/91, dropping in Asia and North Africa, but rising in the Sub-Saharan.

And the status quo deficit in Sub-Saharan Africa likely will increase by 1.6 to 5.5 million tons. The Asian deficit probably will drop from 5.5 to 4.7 million and the North African from 4.8 to 3.2 million.

### **Jamaica, Cape Verde Benefit From Aid**

National food deficits reveal the problem governments face in maintaining aggregate consumption levels. By contrast, calculation of per capita food deficits reveals the potential effects on the population. Comparison of per capita needs from country to country discloses the relative severity of the problem.

In 1989/90, Jamaica, Cape Verde, and Tunisia rank high in both status quo and nutritional deficits. This suggests that in recent years food availability per capita has been insufficient to meet the FAO recommended minimum diet.

In Jamaica and Cape Verde, food aid has helped cut nutrition-based shortfalls. Tunisia in recent years has been able to meet more cereal needs through local production or commercial imports, but currently still must rely on food aid.

Rwanda and Mozambique have per capita nutritional deficits much higher than status quo deficits. This wide margin indicates a serious gap between recent per capita food intake levels and the supplies needed to meet FAO recommended minimum caloric levels. In these countries, the gap has not been filled by either commercial imports

or food assistance in recent years. At the other extreme, Egypt and Swaziland have per capita status quo deficits much higher than nutrition deficits. In these countries, domestic production, commercial imports, or food aid donations have pushed per capita intake levels close to or above the FAO minimum.

Since 1982/83, of the 14 countries most frequently ranked eighth or higher in both status quo and nutrition-based deficits per capita, 10 are in Sub-Saharan Africa, 2 in North Africa, and 2 in the Caribbean.

### *War Plays a Role*

Countries experiencing civil conflicts are commonly among those having the greatest food deficits. However, only one of these, Mozambique, frequently ranks high in national per capita nutritional deficits. More typically, in civil conflicts, one tribal, ethnic, or religious group is grossly deprived, while the majority of the population is adequately or amply supplied, with the result that average per capita needs are small.

For example, Ethiopia has the seventeenth largest nutritional deficit in 1989/90, and had the sixteenth the prior year. At the height of the mid-eighties African drought, Ethiopia ranked thirty-first.

Countries which commonly rank high in per capita nutritional deficits are those with smaller populations and limited agricultural resources; they generally post poor economic performances. They include Somalia, Mauritania, Chad, Haiti, and Mali.

The results here are from a large-scale analysis designed to monitor the food situation in developing countries. They provide clues as to the problems countries face. But, only careful study of each economy can provide a full appreciation of what changes in food aid programs and policies will mean.

Nonetheless, it does seem that investing in resolving and avoiding civil conflict may do more to end hunger than more donations of food aid. [Ray Nightingale (202) 786-1705] AO

## **Payments Cut Credit Demand?**

Lending to agriculture peaked in 1983, reaching almost \$193 billion. During the next 6 years, farm lending fell nearly 30 percent.

The most publicized reason for the decline, and probably the most important, was the farm financial crisis. In the mid-1980's, plummeting land values and cash shortfalls led to a widespread cessation of loan payments and a sharp rise in farmer defaults.

Another factor in the farm lending decline may have been the policy of giving farmers a portion of their deficiency payments in the spring instead of making them wait until the fall harvest. This practice began in 1982. According to a recent survey of commercial bankers and administration officials, advance deficiency payments for federal crop programs may be reducing the amount of money farmers borrow.

Officials from the American Bankers Association, the Independent Bankers Association of America, the American Farm Bureau, and the Farmers Home Administration (FmHA) have estimated that advance deficiency payments may be reducing the amount farmers borrow by 10 to 25 percent.

Because farmers may borrow less, advance payments have helped keep down their production costs and also lowered the risk of default for farm lenders. But the advances may overlap with other federal programs. For example, the government costs of FmHA's guaranteed operating loan program may be more difficult to justify if farmers need less credit.

In practice, identifying overlaps is very difficult, since they can be measured in various ways. It is hard to distinguish between cause and effect and simply simultaneous, but unrelated, events.

## Farm Finance



### *FmHA Shifted To Guarantees*

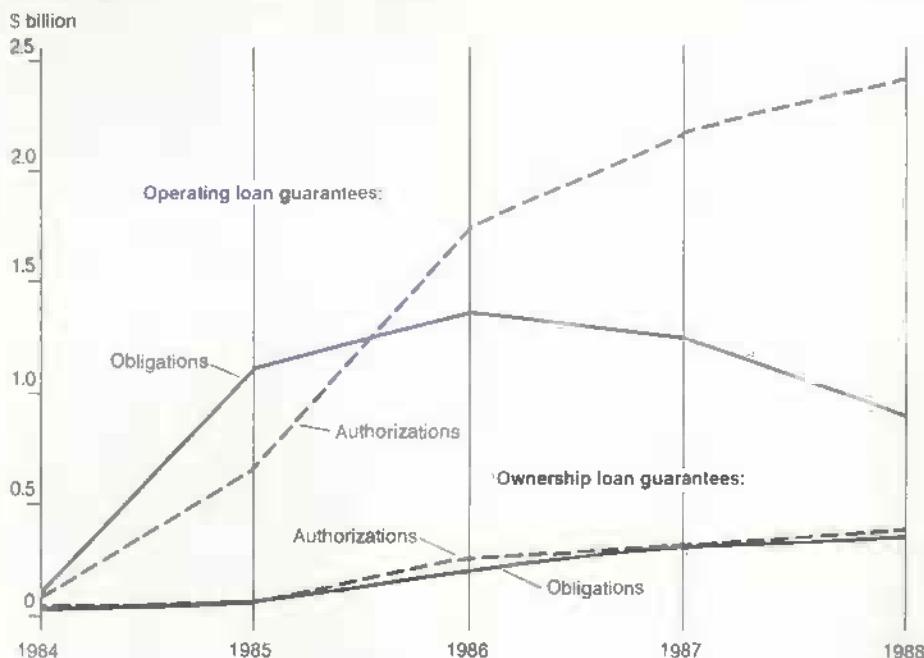
About the time that farm lending peaked and advance payments began, a policy shift took place at FmHA. In the late 1970's and early 1980's, FmHA's costs and outlays began rising steeply. At the end of 1983, to cut costs while maintaining service, FmHA began placing greater emphasis on programs designed to guarantee loans made by private lenders and less emphasis on direct lending.

FmHA direct lending programs, which offer subsidized loans directly from FmHA to farmers, were initiated and have been administered as social programs that are not necessarily designed to pay for themselves. Guaranteed loans, on the other hand, have for the most part not lowered the interest rates that private lenders have charged. The loan guarantees instead have made more of a difference in whether a farmer gets a loan.

Although FmHA had the authority to guarantee farm loans in 1972, the agency guaranteed less than \$100 million annually through 1983. Beginning in fiscal 1986, the Administration began supporting the shift from direct farm loans to loan guarantees by increasing the share of total authorizations going to guaranteed loans. While about \$4 billion in total was authorized for each year during

## Farm Finance

FmHA Operating Loan Guarantees: Authorizations Two Times Actual Use



Advance Deficiency Payments Are Substantial Share of Farm Operating Credit

	1982	1983	1984	1985	1986	1987	1988	1989
\$ million								
Advance deficiency payments	611	1,102	0	2,597	5,119	5,134	4,471	4,024
FmHA transfers	741	831	1,169	1,849	2,546	2,533	NA	NA
Total non-real estate private loan volume outstanding*	63,490	65,354	66,121	62,583	56,738	52,682	51,155	50,174

\*Excludes loans made by individuals and others. NA = not available.

Sources: U.S. General Accounting Office and USDA/ERS.

1986-88, the portion allocated to guarantees rose from \$2 billion to \$3 billion.

Farmers usually borrowed all the funds available through the direct loan programs during those years. But borrowing through the use of the guaranteed loan program has fallen far short of the amount available. Indeed, while funds authorized for guarantees continued to rise through 1988, the amount actually dispersed has been declining since 1987.

### Advance Payments Ballooned

USDA's Agricultural Stabilization and Conservation Service makes advance deficiency payments to farmers to supplement their income when a commodity's market price is expected to be lower than its target price. Farmers growing corn, wheat, barley, sorghum, oats, rice, and upland and extra long staple cotton have been eligible for advance payments for every year since 1982, except 1984.

Advance payments were increased substantially in 1985 and 1986 and have ranged up to 50 percent of total forecast

payments for some crops. In 1986, all crops enrolled in the programs were eligible for at least 30 percent of forecast payments in advance. Eligibility for advances was increased even further in 1987 and 1988, but because total payments declined, the actual level of advances slipped as well.

Underutilization of the FmHA-guaranteed operating loan program could be due either to the lower-than-expected use of operating loans or to lower use by private lenders of loan guarantees. While the first is an effect on the demand side of the credit market, the second is an effect on the supply side.

Advance payments can reduce the demand for operating loans because the funds are made available at the beginning of the growing cycle, at the same time most operating loans are extended. Advance deficiency payments also could be contributing indirectly to private lenders' not using FmHA guarantees. Advance payments improve farmers' cash positions, so private lenders may feel that fewer farmers need their loans guaranteed.

Because private loans cost farmers more than FmHA direct loans, private lenders are probably faced with less excess demand than are FmHA direct lending programs. If advance payments cause loan demand to shrink, the demand for private credit probably falls faster. So, farmers as a group are likely to cut out use of private credit before lowering their demand for FmHA direct loans.

However, an obvious result of advance payments would be a widening gap between authorizations and obligations of guaranteed operating loans. Unlike private lender loan volume, FmHA guarantees have a published authorized supply level.

On the other hand, it could be that private lenders' need for guarantees (supply side) declined more than farmers' need for operating credit (demand side). Private lenders are only likely to enroll a loan in the guarantee program if the farmer's credit quality is borderline.

## Farm Finance

Lower quality loans would not be made at all, since the lender must pay some cost in the case of default. Higher quality loans would not be enrolled in the program because the process of enrollment itself is not free and the loan would not qualify. It may be that there are fewer borderline applicants, and advance payments may have contributed to the decline.

### **More Long-Term Guarantees**

More borrowers are considered borderline for long-term lending than for short-term lending because the extended time horizon means more potential for a drop in the borrower's creditworthiness. And, in fact, the volume of FmHA long-term guaranteed credit has been near the authorization limit in most years.

Evidence suggests that the majority of short-term loans that carried a guarantee have gone to repeat clients whose creditworthiness was declining. As the number of these clients has diminished since 1986—with improving farm conditions and advance payments—so has the use of guarantees on short-term loans.

As with most issues in economics, probably both the supply and the demand sides are factors in this concurrence. Regardless, one way to gauge the impact of advance payments is to consider their volume relative to the volumes of FmHA and private credit.

### **Advance Payments Reach 10 Percent of Debt**

Except for 1984, government support of agriculture through advance deficiency payments has been greater than support through the FmHA every year that the advance payments option has been in effect. Advance deficiency payments reached about twice FmHA transfers in 1986 and 1987, a proportion that likely remained through the end of the 1980's.

Also, in 1987 advance deficiency payments made up nearly 10 percent of the total volume of outstanding non-real estate private debt, excluding loans made by individuals and others. In 1989, this figure had dropped to a little above 8 percent. But that's high compared to 1.7 percent in 1982.

The volume of advance deficiency payments is a low estimate of the impact that advances may have on credit markets and credit programs. Also likely to help reduce farm debt are the Conservation Reserve Program and the Dairy Termination Program. Farmers received \$655 million and \$587 million, respectively, through these programs in 1987 alone.

The volume of advance federal commodity payments has been substantial relative to farm loan volume. While there is no direct evidence that an overlap exists between advance payments and federal farm credit programs, the potential rises in step with increases in the alternative funding source.

### **How the Comparison Was Calculated**

For this study, the estimation of deficiency payments used the payments due under provisions of a given crop year program, and includes both payments in cash and the face value of generic certificates issued in lieu of cash.

FmHA transfers were calculated by multiplying the value of loans made by the difference between FmHA and market interest rates for direct loan programs, plus funds requested by FmHA to cover loan losses of the Agricultural Credit Insurance Fund (i.e., including losses under the guarantees). [Merritt Hughes (202) 786-1892] **AO**

## Policy

### **The Pattern of Crop Outlays**



**G**overnment outlays to farmers (here defined as direct payments plus net CCC loans for covered crops) increased significantly during the mid-1980's. In 1986, the peak year, outlays totaled over \$20 billion, up roughly 1,000 percent from 1980, and represented about 12 percent of gross farm income. Since then, outlays have declined.

Government outlays are made only for selected commodities, and the commodities' production is typically concentrated in specific geographic areas. Thus, government outlays show regional concentrations. Similarly, the importance of government outlays to gross farm income varies by region.

To analyze the regional dependence on government outlays, each county in the continental U.S. was assigned to one of four groups based on the share of gross farm income derived from government outlays. Income and government outlays

## Policy

### Farm Sector Characteristics by County Dependence on Government Outlays

Item	Unit	U.S.	Percent of gross farm income from government outlays				
			Less than 10.0	10.0-19.9	20.0-33.3	Over 33.3	
<b>COUNTIES</b>							
Total	Number	3,099	2,004	730	297	67	
Agrbusiness /1	-	800	371	225	164	40	
Farm production /2	-	434	145	141	115	33	
<b>FARMS, 1987</b>							
Total	Percent	100.0	62.5	27.7	8.0	1.8	
Receiving gov't outlays	-	33.5	18.9	54.2	66.4	75.7	
<b>HARVESTED CROPLAND, 1987</b>							
	-	100.0	33.4	39.8	20.0	6.8	
<b>GROSS FARM INCOME, AVERAGE 1983-86</b>							
	-	100.0	51.4	33.3	12.6	2.7	
<b>GOVERNMENT OUTLAYS, AVERAGE 1983-86</b>							
Total	-	100.0	19.9	42.2	28.5	9.4	
Per farm /3	\$	4,321	1,379	6,529	15,531	22,529	

1/ One-third or more of total county employment is in farm production, agricultural input industries, or processing and marketing. 2/ One-third or more of total county employment is in farm production. 3/ Number of farms, average 1982 and 1987.

Source: U.S. Department of Commerce, Bureau of Economic Analysis and Bureau of the Census.

were averaged for 1983-86, the latest years for which county-level data were available.

Averaging data over several years moderates the effects of farm income fluctuations due to weather and some other annual factors. Government outlays during this period accounted for at least 10 percent of gross farm income in more than one-third of all U.S. counties.

### Most Dependent Are in Two Clusters

Sixty-seven counties, accounting for 1.8 percent of all U.S. farms, received one-third or more of their gross farm income from government outlays. The counties are concentrated in two widely spaced geographic regions.

The northern area is a band of counties starting in the Red River Valley in northwest Minnesota and extending west through North Dakota and northern Montana. Wheat is the dominant crop in this area, although sugarbeets are also grown. The southern area is a cluster of counties

in the Texas High Plains where cotton is the most important commodity.

Three-fourths of the farms in these 67 counties received government outlays in 1987, compared with one-third for the U.S. as a whole. Farm operators in these counties received 9.4 percent of all government outlays in 1983-86. For all farms in the group, including nonparticipants, outlays averaged \$22,529 per farm.

Average farm size in this group was 1,444 acres, more than three times the U.S. average. And 62 percent of them were over 500 acres, compared with only 17.7 percent nationwide. However, sales per acre were one-third the U.S. average, mainly because of the predominance of dryland wheat production, which is characterized by low yields and low revenue per acre.

The economies of 33 of these counties were highly dependent on the farm production sector, with one-third or more of employment in farm production alone. Another seven counties were similarly dependent on agribusiness in general, including jobs in agricultural inputs, processing, and marketing industries, in addition to farm production.

### April Errata

In the April issue, it was incorrectly reported that in 1988, 12 percent of all farms received 90 percent of direct government payments, and 32 percent of farms which received government payments received 90 percent of direct government payments.

The report should have been that 18 percent of all farms received 90 percent of direct government payments, and 49 percent of those farms which received government payments received 90 percent of the total payments. (Gerald Whittaker (202) 786-1807)

### Large Shares in South & West

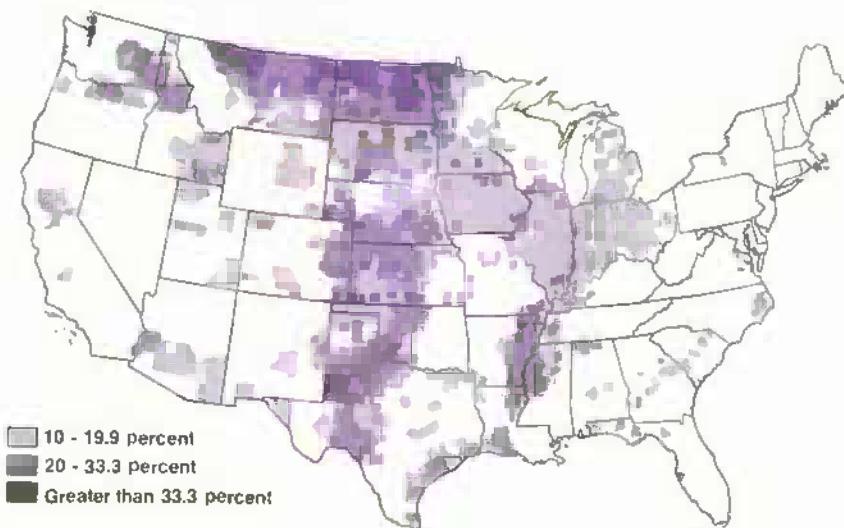
Nationally, 297 counties, accounting for 8 percent of U.S. farms, received 20 to 33 percent of their gross farm income from government outlays. These counties are in a corridor that runs from North Dakota to West Texas, as well as the Palouse area of the Northwest, north central Montana, the Mississippi Delta, and the Texas and Louisiana Gulf Coast.

Although this is a very diverse group of counties, wheat is the dominant crop, followed by soybeans and corn. Cotton and rice also are important in the southern counties.

Of the 166,914 farms in these 297 counties, two-thirds received government outlays in 1987. Farmers in these counties received 28.5 percent of total U.S. government outlays. Including nonparticipants, government outlays averaged \$15,531 per farm in this group.

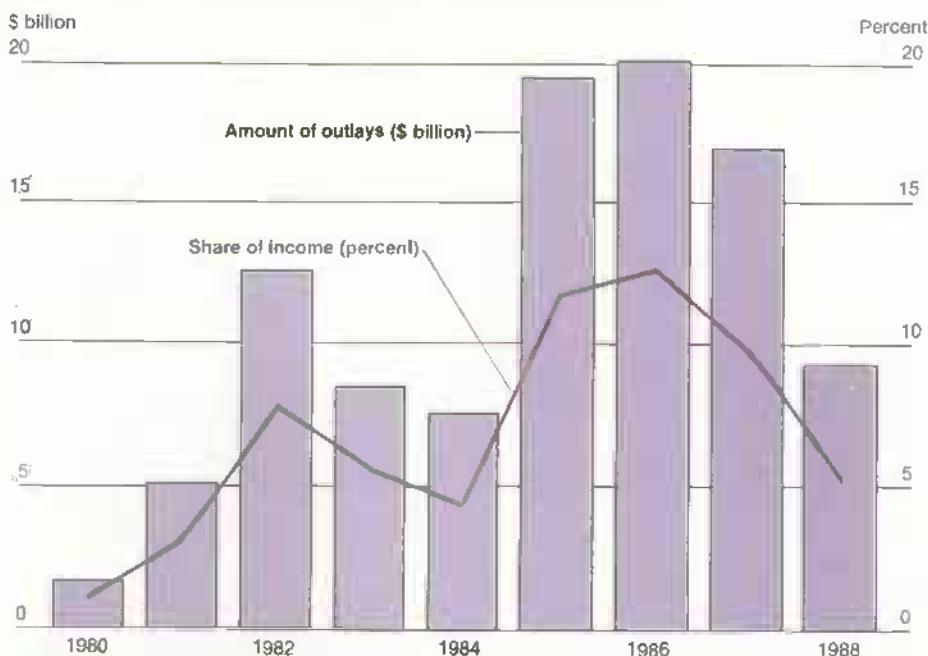
These farms contained 20 percent of all U.S. cropland harvested in 1987, and irrigation (mostly nonsubsidized) is more important here than in other high-outlay groups. Average farm size is almost three times the national average, while the value of sales is 1.5 times the U.S. average. Almost one-half of the farms in these counties are 500 acres or more.

**Government Outlays Are Biggest Share of Gross Farm Income in N. Plains & Texas High Plains\***



\*1983-86 average.

**Outlays' Share of National Gross Farm Income Down Since 1986**



In 39 percent of the counties, over one-third of total employment was in farm production. An additional 16 percent of the counties were highly dependent on agribusiness, including farm production. Demand generated by the input, production, and processing needs for the 50 mil-

lion harvested acres in these counties accounts for the high level of employment in the local agribusiness sector.

### Where Outlays Are Smaller Share

In 730 counties, accounting for one-fourth of all U.S. farms, 10 to 20 percent

of gross farm income came from government outlays during 1983-86. These counties dominate the corn-soybean-hog belt of the Midwest, and many are adjacent to the more highly dependent groups of counties described earlier.

About half the farms received government outlays in 1987. Farm operators in the group received 42 percent of total government outlays. Outlays to all farmers in the 730 counties, including nonparticipants, averaged \$6,529. These counties contain 40 percent of the nation's harvested cropland.

These counties have as many farms under 50 acres as over 500 acres, with about half falling in the middle. Farms are larger than the U.S. average, but only about half the size of the higher payment groups. Still, market value of sales per acre is higher here than in the other two high-payment groups.

Twenty percent of the 730 counties in this group derive over 30 percent of their total employment from farm production activities. Another 10 percent of the counties rely on farm production and other agribusiness activities combined to provide more than one-third of employment. These counties depend less on farming and other agribusinesses than the high-payment groups because the manufacturing sector dominates through much of the Midwest.

### Dependence Tied To Production

The analysis shows that counties in which government outlays are an important component of gross farm income get a large share of total government outlays. For example, in 1983-86, the 364 counties where government outlays accounted for 20 percent or more of gross farm income contained 10 percent of U.S. farms, but received 38 percent of U.S. government outlays.

Payments from the Conservation Reserve Program, which originated in the Food

## Policy

Security Act of 1985, had only a small impact on farmers' dependence patterns during 1983-86. What impact there was probably reinforced the observed county patterns. It seems unlikely that the CRP has materially changed the geographic concentrations of farmers dependent on government outlays since that time.

Government outlays dropped sharply in 1987 and 1988. Although this analysis did not examine shifts in outlays over time, it seems likely that changes in government outlays would vary by region because production varies by region.

For example, when government outlays fell by \$7.6 billion in 1988, 68 percent of that drop was due to farmers' repaying CCC loans after the drought raised market prices of crops. Corn and soybeans accounted for three-fourths of the debt reduction for commodities that had net loan decreases.

Since the Corn Belt produces most of the corn and soybeans in the U.S., it follows that dependence on government outlays through CCC loans would have fallen the most in the Corn Belt counties rather than elsewhere. [Judith E. Sommer and Mindy F. Petruulis (202) 786-1525] AO

### Upcoming Economic Reports

#### Summary Released      Title

#### May

10	World Ag. Supply & Demand
15	Livestock & Poultry
16	USSR
18	Agricultural Outlook
21	Wheat
	U.S. Agricultural Trade Update
23	Agricultural Income & Finance
24	Feed
25	Livestock & Poultry Update
30	Exports
31	Cotton & Wool

## Time for Grain Quality Laws?

Over the last decade, the competitive world grain market and food safety concerns have made grain quality ever more critical. Although the U.S. is a major exporter of grains and oilseeds, a perception exists that consistently clean grain can be obtained more easily from other suppliers. The perception presents a challenge to U.S. competitiveness in world markets.

For example, the U.S. share of Japanese soybean imports has declined from nearly 90 percent in 1985/86 to a projected 78 percent in 1989/90. In addition to having lower prices, higher protein, and greater oil levels, Brazilian soybeans are associated with lower levels of foreign material than U.S. beans, some observers have said.

### Senate Considers Daschle-Bond Bill

Late last year, a bill entitled the Grain Quality Incentives Act of 1989 (S. 1977) was introduced in the Senate, chiefly by Thomas Daschle (D.-S.D.) and Christopher Bond (R.-Mo.).

The stated purpose of the 1989 act would be to "improve the competitive position of U.S. grain in international and domestic markets and to facilitate the communication of quality characteristics that final buyers of grain desire, to provide certain incentives to producers of high-quality grain, and to improve the quality of farmer-owned and federally owned reserve grain stocks."

Provisions of the 1989 act would:

- authorize the Federal Grain Inspection Service (FGIS) to prohibit blending U.S. number 3 or better grain with "nongrain substances, (or) highly toxic, heavily damaged, or defective grain,"
- require the FGIS to set export cleanliness standards for higher grades

that equal the levels achieved by competing exporters,

- require class- and grade-determining factors to reflect economic values to users,
- mandate development of procedures for unofficial inspections and for federal storage, and
- modify USDA's CCC loan premium/discount program to encourage cleanliness.

### Importers Want Clean Grain

The chief complaints from importers about U.S. grain quality stem from a lack of uniformity in cleanliness and key end-use attributes, even within shipments. This problem arises in part from market mechanisms that emphasize quantity over quality. These areas are addressed in new ways in S. 1977.

In early 1989, the Congressional Office of Technology Assessment (OTA) issued a report titled "Enhancing the Quality of U.S. Grain for International Trade." The study dealt extensively with these issues and how the U.S. grain marketing system compares with those of major competitors. The report singled out five areas in which the U.S. has a distinct advantage over competitors and six problem areas that need to be considered.

The advantages of the U.S. system include efficiency (in cost and variety of commodities handled), productivity growth, the range of grain qualities available to buyers, a stable and independent grading and inspection service, and market-determined premiums and discounts.

However, the OTA report cited the following problem areas:

- lack of an effective national policy on grain seed variety release,
- limitations in grading standards,
- buyers' attitudes toward the quality of U.S. grain,
- the nonresponsiveness of farm policy to differences in grain quality,
- the changing role of demand, particularly increasing market segmentation, and

- the differences between U.S. and competitor policies, which cause competitor grains to be preferred at equal prices.

Uniformity assures foreign buyers of a consistent minimum quality of grains and oilseeds, which is desired to promote optimum processing. Importers want uniformity within and between shipments.

The lack of uniformity in U.S. exports derives in part from the recent proliferation of available varieties of the key crops. For wheat, this dilemma is compounded because the U.S. produces a wide variety of wheat classes across quite different climatic regions.

Another contributing factor is the large scale of the U.S. grain industry. Given the volume of grain moving through marketing channels, few companies use storage facilities to segregate low- and high-quality grain for buyers.

Lack of uniformity hinders the U.S. in profiting from the increasing segmentation in the world market, particularly for wheat. This problem is not faced by other major exporters, most of whom have laws restricting variety availability and grow wheat in fewer classes.

In addition, most countries subject new varieties to extensive testing before they may be licensed. For example, in Canada and Australia, a new variety must meet certain quality criteria, such as protein content for wheat, before qualifying. But no such controls exist in the U.S.

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In fact, the release of new varieties here is limited only by the Plant Variety Protection Act of 1970, under which breeders may seek legal protection of their work, and by the potential profitability of the variety. However, this procedure is not required, and is used primarily by private breeders (see the November 1989 *Agricultural Outlook*).

### Bill Focuses on Quality Incentives

The other aspect of S. 1977 that departs from earlier grain quality legislation is its focus on creating quality incentives within U.S. commodity programs. Provisions would set price support incentives for clean grain and require a certain quality for placement in the Farmer-Owned Reserve and CCC stocks.

In the current domestic market, premium or discount pricing accounts for all variations in grain quality as determined by official grading standards (such as test weight and damaged kernels), as well as for other factors that domestic users regard as important. The pricing schedules vary according to different supply and demand conditions, and provide information to both producers and end-users as to what characteristics of grain are valued in the market.

However, price supports offered by the government in the form of nonrecourse loans and FOR storage payments do not differentiate grain on the basis of quality as thoroughly as the market does. This shortcoming tends to distort the market by furnishing an outlet for the lower quality grain.

Producers delivering lower quality grain to the CCC loan and FOR programs are assessed discounts established by the Agricultural Stabilization and Conservation Service (ASCS). Market premiums and discounts may vary substantially by region, and are potentially greater than the ASCS schedule. The only exception to this situation is with sample grade grain, which is currently ineligible for entry into the FOR.

The portion of CCC and FOR grain that is forfeited then remains in storage until disposed of by the government through

food donations or concessionary export programs, or otherwise sold (such as through auctions or use of generic certificates).

This probably contributes to the frequency of complaints that U.S. export grain is not as good as that sold domestically; some low-quality grain is exported in concessionary sales or blended with high-quality grain. Establishing a stronger link between price supports and a premium/discount schedule set according to market pricing could eliminate much of the problem created by this artificial division of outlets.

### Is Legislation Needed?

While most observers would agree that selling quality grains is necessary to maintain U.S. competitiveness in the world market, not everyone agrees on the approach—whether to do it through a legislative initiative or through a regulatory strategy. Cost-benefit studies would help make clear whether and to what extent legislation or more regulation is needed.

Some observers argue that, for the most part, existing laws are adequate to achieve the overall Congressional objectives of improving grain quality. They contend that U.S. industry can deliver almost any type of grain desired. Instead, they propose closer regulation of grain quality through existing laws.

Procedures now in place do permit FGIS to develop and change grades and standards to meet the objectives of market incentives and to improve quality consistent with cost and value. In addition, USDA is taking steps to strengthen end-use performance data.

Any efforts to address the quality issue, whether through new legislation or tighter regulation, must be twofold. They must both focus on boosting the quality of U.S. grain in relation to competitors, when objective measures are possible, and also convince importers that the U.S. delivers the quality of grain they are expecting. *JStephanie Mercier and William Lin (202) 786-1840* AO

## Special Article

# Europe in Turmoil

What will happen to European agriculture as Eastern Bloc countries emerge from their near half-century of Communist rule?

While the "Eurocrats" at EC headquarters in Brussels have focused on completing the European Community's Europe 1992 unification plans, the recent political events in Eastern Europe have forced the EC to look beyond its borders as the 1992 deadline approaches.

The Eastern European developments that began in 1989, particularly in East Germany, have created pressure to speed up economic and political integration in Europe. German reunification could take place this year. And all other Eastern European nations, except Albania, are moving toward market-oriented systems.

Some of Europe's leaders have called for a deeper political union to complement the greater economic and monetary integration that is occurring with the EC's 1992 program. One concern is that strengthening ties with the former Eastern Bloc countries could interfere with the EC's attempt to unify its existing 12 member countries. There is a general feeling that a stronger EC is needed to counterbalance these forces from the east.

Some EC members, notably Ireland, Greece, Portugal, and Spain, are worried about their own economic progress. They fear they will suffer if investment funds and economic aid that they expected from greater EC integration instead go to the newly emerging democracies of Eastern Europe.

### *Competition or Cooperation: Either Could Develop*

As the Eastern European countries gear up to become more serious players in international markets, they face what will be the world's largest unified market, the EC, right next door. Both East and West now are big agricultural producers.

The EC, because of pricing and trade policies under the Common Agricultural Policy (CAP), has made a dramatic transition from being one of the world's largest importers of agricultural products to being one of the largest exporters for some commodities.



In contrast, the Eastern European countries under central planning changed from significant net exporters to sizable net importers of grain. In recent years, though, their grain imports have slipped. Some Eastern European nations have increased production in the last few years, while in others demand for imports has dropped because of credit constraints.

The Eastern European countries, in urgent need of hard currency to pay for economic development, could look to agricultural exports for those funds. But, current EC policies of subsidizing exports of surplus farm output could continue to keep world prices artificially low, limiting Eastern European hard currency earnings.

Nevertheless, under a competitor scenario, if Eastern European nations can close half the gap between their yields and the EC's and eliminate their policies affecting consumer and producer prices, projections show that the region could become an exporter of pork and beef to countries other than the Soviet Union by the year 2000. The gains would come from more market-oriented input-delivery systems and private land ownership.

Eastern Europe also could export wheat and some coarse grains. Exports of coarse grains other than corn could become the most notable. In this framework, Eastern Europe likely would boost oilseed and high-value imports. These projections assume that the EC would not change the CAP.

Mimicking the EC's agricultural policies, many Eastern European countries could develop agricultural support programs of their own, providing growers with price floors and intervention purchasing when domestic prices went below the floors.

## **German Reunification May Benefit U.S. Agriculture**

Big changes are ahead for German farmers as East and West Germany quickly move toward reunification. After reunification, East German farmers will sharply boost output in response to the high prices set by the EC's Common Agricultural Policy. This will spell more competition for West German and other EC producers.

However, during the transition to complete reunification, West Germany probably will keep its current trade controls on agricultural imports from East Germany. And EC agricultural surpluses likely will flow east to meet any short-term deficiencies there.

When West German Deutschemarks replace East German Ostmarks, the East Germans will get a boost in their purchasing power. With this newfound wealth, they are likely to increase spending on consumer items, especially those that have been largely unavailable east of the old Iron Curtain. U.S. sales of protein feeds, horticultural products, and processed foods to Germany could go up as a result.

Once reunification of Germany occurs, the EC will be obliged to grant the same types of aid to East Germany as it provides to other less developed regions of the EC. The EC has estimated the cost of this aid at \$9.6 billion a year, about half would be paid by West Germany.

Returns to farmers then would rise substantially, and the countries could significantly boost agricultural exports by 2000. With expected lower production costs, some Eastern European nations likely would be able to export at competitive world prices.

On the other hand, under a cooperation scenario, if Eastern Europe became integrated with the EC, what would happen to the CAP? If the current CAP were extended to Eastern Europe, farm production there would surge, probably increasing EC stocks and subsidized exports to unsustainable levels. So the CAP is unlikely to be extended in a liberal fashion to all Eastern European countries, because of the budgetary implications for the EC.

Some projections suggest EC spending for agricultural market support would go up 8 percent (\$2.4 billion) if the CAP were extended to East Germany alone. At this stage, such a step is more likely for East Germany than other Eastern European nations, given the quick pace of German reunification (see the accompanying box).

The longer term outlook for European producers is colored by what will come out of the GATT negotiations. If the talks lead to a more liberalized trading environment, current producer

### **Agriculture Plays a Larger Role in E. Europe Than in the EC**

Item	Unit	European Community	Eastern Europe
Total area	Hectares	225,420	124,597
Population	Million	324.6	139.5
GDP per capita*	U.S. \$	12,510	7,929
Ag. share of GDP	Percent	3.5	18.0
Ag. share of labor force	Percent of pop.	2.6	13.0
Average farm size	Hectares	12.9	1,574.0

\*GNP for Eastern Europe. All data are for 1988, except the ag. share of labor force and farm size which are as of 1985.

Sources: USDA-ERS, and the International Monetary Fund.

incentives under the CAP would be cut. As a result, EC agricultural output would grow more slowly or actually decline. And Eastern European countries would be limited in the types of subsidies they could offer their farmers if the countries want to be players in the international marketplace.

But exactly what will happen is impossible to forecast with a reasonable degree of certainty—too many factors are changing too fast for solid forecasting work. A profile of the agricultural sectors in the EC and Eastern Europe may provide some basis for understanding the rapidly evolving situation.

### **Marked Differences in Farm Sectors**

Eastern Europe is a little more than half the size of the EC, with a population 43 percent of the EC's. But, it produces only 27 percent of the EC's gross domestic product (GDP). On a per capita basis, GDP in 1988 was an estimated \$7,929 for Eastern Europe and \$12,510 for the EC.

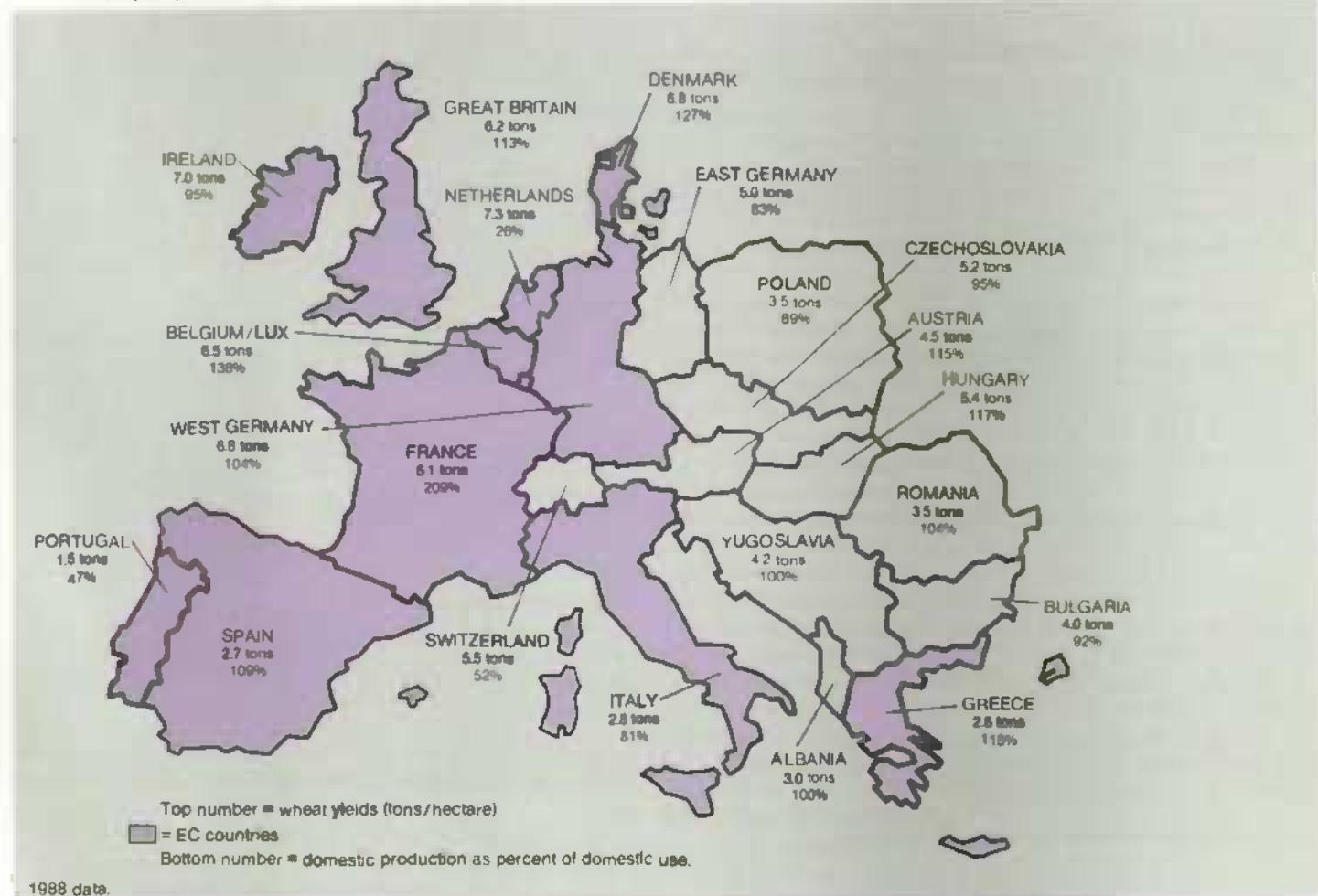
By most measures, agriculture plays a much larger role in the economies of Eastern than of Western Europe. Agriculture's share of GDP in Eastern Europe is more than five times greater than in the EC. Agricultural GDP ranges from 12 to 27 percent of total GDP in Eastern European countries, but only 2 to 15 percent in the EC. That's compared to a 2.6-percent agricultural share of GDP in the U.S.

The Eastern European countries generally recognized as being the most industrialized, Czechoslovakia and East Germany, have agricultural sectors that play a larger role in their overall economies than any of the EC countries except Greece.

Another major difference is that farming in Eastern Europe is five times as labor intensive as in the EC. Agriculture employs 13 percent of the population in Eastern Europe, but less than 3

## Special Article

### Most of Europe Is Self-Sufficient in Cereals Production



1988 data.

in the EC and only 0.8 in the U.S. However, Czechoslovakia and East Germany employ only 4 percent of their populations in agriculture, nearly on par with the EC average.

Still, the two largest Eastern European producers, Poland and Romania, employ 15 and 24 percent of their population in agriculture. The EC's two top producers, France and West Germany, employ only 3 and 1 percent.

Both the EC and Eastern Europe use about 59 percent of their total land area for agriculture. The EC has almost twice the total area, but uses a smaller share of it for crops and a greater share for livestock. Arable cropland accounts for 67 percent of agricultural land in Eastern Europe and 54 percent in the EC. Pasture accounts for 42 percent of the EC's agricultural land, but only 28 percent of Eastern Europe's. Irrigated area is minor in both regions.

Average farm sizes in the two regions differ dramatically. The EC, with its market-oriented system and private property ownership, is comprised of numerous small farms, averaging about 13 hectares each (1 hectare equals 2.47 acres). Nationally, farm size in the EC ranges from a low of 4.3 hectares in Greece and Portugal to a high of 65 hectares in the United Kingdom.

In contrast, Eastern European countries, with their histories of centrally planned government and low private property ownership (except in Poland and Yugoslavia), have socialized farms that average 1,574 hectares. Socialized farms range from 79 to 9,692 hectares, depending on the country and organizational structure of the farm.

Eastern European socialized farms often resemble small towns, rather than stand-alone farms. The socialized farms themselves are seldom specialized, but they are generally made up of numerous smaller production units that may specialize. What private farms there are often consist of no more than 1 hectare, but they contribute substantially to vegetable, meat, and fruit production.

## *EC's Farm Output Dwarfs E. Europe's*

Calculated according to international prices, EC agricultural output has a value more than twice that of Eastern Europe. In Eastern Europe, crop production accounts for more than half of the total, but in the EC, livestock production accounts for more than half. On the whole, EC countries appear more specialized than the Eastern European countries, perhaps allowing the EC to produce more efficiently.

Despite the differences in composition of total output and the degree of specialization, both regions produce many of the same bulk commodities: wheat, corn, coarse grains, meat, and dairy products. This similarity in production means that exportable surpluses in the regions would compete with each other.

In 1988, EC grain production was 165 million metric tons (mmt), compared with Eastern Europe's 105 mmt. Wheat production accounted for 45 percent of the EC's grain production and 42 percent of Eastern Europe's. Corn comprises a much larger share of grain production in Eastern Europe than in the EC. In fact, Eastern Europe produces nearly equal amounts of corn and wheat.

Barley accounts for nearly 31 percent of total grain production in the EC but only 15 percent in Eastern Europe. The EC exported 18 mmt of grains in 1988, while Eastern Europe imported 3.5 mmt.

Meat production patterns are similar in the two regions. Pork predominates, followed by beef, poultry, and some mutton and lamb. In 1988, total meat production was 26 mmt in the EC and 13 mmt in Eastern Europe. Despite the difference in total production, the EC and Eastern Europe exported similar amounts of meat in 1988, nearly 1 mmt each.

Production of other agricultural items varies. The EC's southern members are sizable producers of vegetables, fruits, and nuts, yet the EC as a whole imported \$4 billion of these commodities in 1986. Eastern Europe is not a large producer of these items, but imported only \$41 million in 1986.

Both regions produce limited amounts of oilcrops and products, and are large net importers on average. The value of EC net imports for oilcrops and products was nearly \$6 billion in 1986. Eastern European imports of these commodities in 1986 were nearly \$1 billion.

## *E. Europe Is Less Efficient*

Based on yields and input use per unit of output, EC agriculture appears significantly more efficient than Eastern European in both crop and livestock production.

Grain yields in the EC are anywhere from 25 to 50 percent greater than in Eastern Europe. The largest difference is in coarse grains other than corn. EC wheat and barley yields are nearly 30 percent higher than Eastern Europe's. However, Eastern Europe's grain yields are greater than U.S. yields for wheat and coarse grains other than corn, so the region's grain yields are not low in absolute terms.

EC yields are high because grain prices are supported by the CAP at levels well above world prices; farmers have the incentive to apply heavy amounts of yield-enhancing chemicals. Despite this, EC fertilizer application rates are only 13 percent higher than Eastern Europe's.

In Europe as a whole, farmland is in tighter supply than in the U.S., so higher yields are needed for profitable farming. U.S. fertilizer application rates are much lower than in the EC or Eastern Europe because of more favorable natural conditions and the relative abundance of farmland.

Yield differences between the EC and Eastern Europe are thought to arise from differences in farming techniques, input-delivery systems, genetic content of the crops, and profit incentives.

Livestock yields, measured by production-inventory ratios, show a differential similar to grains. EC meat yields are from 26 to 44 percent bigger than Eastern Europe's; pork yields are 26 percent higher and beef yields are 29 percent higher. EC mutton yields are nearly 44 percent greater than Eastern Europe's.

The main difference in meat yields comes from the longer finishing times needed in Eastern Europe. Slaughter weights are nearly identical in the two regions for pork and mutton, but the EC beef slaughter weight is greater than the Eastern European. Milk yields in the EC are 35 percent greater than in Eastern Europe, but nearly 40 percent below U.S. levels.

The main differences in livestock yields between East and West are thought to come from inefficient feeding practices in Eastern Europe (hence the longer finishing times) and, as with crops, poor genetic content, inadequate input marketing, and low profit incentives.

## *Diets Reflect Incomes, Availabilities*

European countries display a wide variation in their consumption of agricultural products. On a per capita basis, vegetable consumption ranks the highest for EC countries, followed by meat, grains, and potatoes. For Eastern European countries, the ranking is grains, vegetables, potatoes, and meat.

People in EC countries consume, on average, more vegetables (120 versus 115 kilograms) and meat (92 versus 77 kilograms)

## Special Article

### Substantial Variations in Europeans' Diets

	Total meat	Total grains 1/	Potatoes	Vegetables	Sugar	Eggs
Kilograms per capita in 1987						
EC 2/	91.7	84.5	80.4	119.7	31.7	13.6
BLEU 3/	101.3	70.8	96.0	92.9	37.7	14.5
Denmark	104.0	68.1	72.3	77.1	38.8	14.4
France	108.2	79.0	73.9 4/	123.0 4/	35.5 4/	15.5
W. Germany	103.5	74.1	72.3	77.4	34.9	16.2
Greece	97.4	125.6	78.3	195.4	27.8	12.4
Ireland	90.6	90.4	140.9	82.2	40.7	11.3
Italy	84.9	116.6	41.9	173.3	26.7	11.5
Netherlands	85.6	54.7	88.5	103.9	38.9	9.3
Portugal	64.3	101.4	88.0	NA	27.4	NA
Spain	86.0	71.0	103.1	147.9	23.7	NA
UK	77.9	78.9	110.5	86.2	32.1	13.6
<b>EASTERN EUROPE</b>						
Bulgaria	77.8	144.0	28.0	NA	35.0	15.5
Czechoslovakia	89.0	112.0	73.0	NA	37.3	20.1
E. Germany	99.4	99.0	147.0	102.0	40.8	17.8
Hungary	101.5	112.0	50.0	79.0	39.6	18.5
Poland	74.4	118.0	143.0	116.0	46.1	11.7
Romania	55.0 5/	175.0	105.0	170.0	NA	17.4
Yugoslavia 6/	69.0	168.0	57.0	85.0	38.0	10.3

1/Flour equivalents 2/ EC-10 for vegetables and eggs 3/ Belgium-Luxembourg Economic Union. 4/ 1986. 5/ Includes fish. 6/ Estimate.

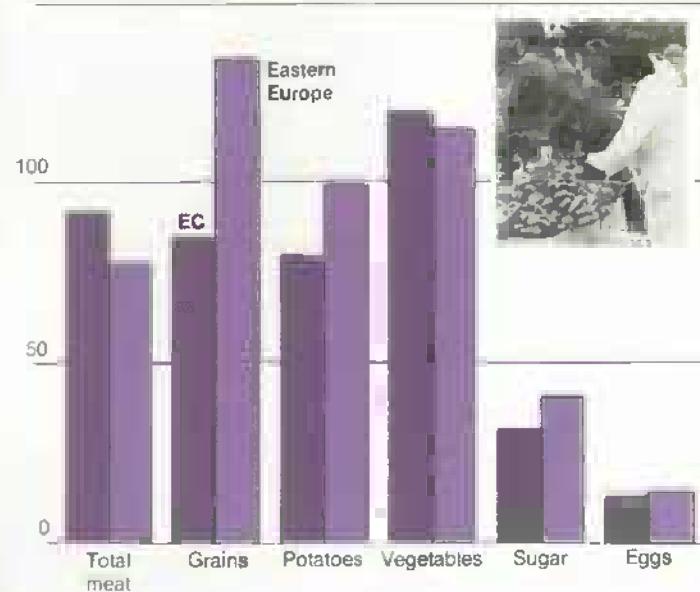
NA=not available

Source: Office of Official EC Publications, and USDA-ERS.

### E. Europe Eats More Starches, EC Eats More Meat & Vegetables

Kilograms per capita

150



Data for 1987.

than people in Eastern European countries. But Eastern Europeans consume more grain (134 versus 85 kilograms) and potatoes (99 versus 80 kilograms).

Eastern European vegetable consumption is heavily concentrated in cabbage and tomatoes. And, vegetables tend to be available only during the harvest season. EC vegetable consumption, on the other hand, is diverse and year-round. For sugar and eggs, Eastern Europeans consume slightly more than EC citizens.

Regional averages mask wide variations in consumption patterns among countries in the two groups. Per capita consumption of potatoes displays the largest range, followed by vegetables and grains. For potatoes, EC per capita consumption ranges from a low of 42 kilograms in Italy, where pasta is the preferred starch, to a high of 141 kilograms in Ireland. Eastern European consumption ranges from 28 kilograms in Bulgaria to 147 in East Germany.

In contrast, meat and sugar consumption ranges show the smallest variation between the two regions. For meat, EC per capita consumption ranges from a low of 64 kilograms in Portugal to a high of 108 in France, while Eastern European consumption ranges from 55 kilograms in Romania to nearly 102 in Hungary. For grains, EC per capita consumption ranges from 55 kilograms in the Netherlands to 126 in Greece, while Eastern European consumption ranges from 99 kilograms in East Germany to 175 in Romania.

While variations in supply, purchasing power, and price account for much of the differences in consumption, dietary

preferences also are important. Since most EC countries are at the high end of world caloric consumption and at or near saturation levels for most livestock products, there is little prospect for significant increases in EC meat consumption.

On the other hand, Eastern European countries with relatively high grain and potato consumption and somewhat lower meat and vegetable consumption than their neighbors are likely to adjust their consumption patterns more. They could eventually eat as much meat and vegetables as the EC does, given more market-oriented agriculture and greater trade with the West.

Still, Eastern European meat consumption per capita is already 84 percent of the EC level despite a per capita income only 63 percent of the EC's. Compared with countries with similar per capita incomes, Eastern Europe consumes high levels of meat per capita. So, as the choice of consumer goods widens, meat consumption may not rise much, even as incomes go up.

### ***Both Regions Are Net Importers***

EC net agricultural imports amounted to nearly \$16 billion in 1987, while Eastern European net agricultural imports came to \$800 million. The U.S. share of these net imports was nearly 13 percent for the EC and 8 percent for Eastern Europe. Nearly \$10 billion of EC import expenditures go to oilseeds, oilseed products, fruit, vegetables, and nuts. The EC is a net exporter of grains and meat.

Eastern Europe is a net meat exporter, though most goes to the Soviet Union for soft currency. Most of Eastern Europe's import expenditures are on grains, oilseeds, and oilseed products (\$358 million from the U.S. alone in 1987).

EC agricultural import expenditures per capita were \$49 in 1987, while Eastern Europe spent \$6. An important difference between the two regions is the amount imported of nonseed items. While both countries import significant amounts of feed-stuffs for their feed-livestock economies, the EC also imports substantial quantities of final consumer products, such as vegetables, fruit, and nuts.

Eastern European agricultural trade has been run mainly by central planners, not consumers, hence final consumer product imports were severely limited. [Robert Koopman (202) 786-1630, Walter Gardiner and Mary Lisa Madell (202) 786-1610, and Gregory Gajewski (202) 786-3313] AO

## **The USSR: A Look Ahead**



In March, a new 5-year Long-Term Grain Agreement (LTGA) between the U.S. and the USSR was agreed upon in principle, and it could be finalized in the next several months. The agreement, the third since fiscal 1977, could take effect at the beginning of 1991.

Coupled with continuing Soviet grain agreements with Canada and Argentina, it should commit the USSR to large imports through at least the first half of the 1990's. Soviet willingness to extend grain import commitments reflects shortfalls in domestic supplies despite continued calls for self-sufficiency.

### ***Demand Outstrips Domestic Supplies***

Soviet grain output in 1990 is unlikely to satisfy domestic needs, even if 1989's record yield is surpassed. Massive, chronic grain losses, highly inefficient use of grain in the livestock sector, and serious pricing and marketing distortions will keep the Soviets dependent on grain imports for the foreseeable future. The losses are associated with poor harvesting, storage, transportation, and processing practices.

In the hope of reaching grain self-sufficiency, the Soviets are pushing two main strategies: increased stability and growth in grain output, and a reduction in grain losses and waste.

## Special Article

### Tentative Terms of the New U.S.-USSR Long-Term Grain Agreement 1/

	New agreement	Old agreement
Duration	5 years 2/	Oct. 1, 1984-Dec. 31, 1990
Annual minimum purchase levels	4 million tons wheat, 4 million tons coarse grains, 3/ 2 million tons either wheat, coarse grains, soybeans, or meal 4/	4 million tons wheat, 4 million tons corn, 1 million tons either wheat, corn, soybeans, or meal 4/
5-year minimum purchase levels	20 million tons wheat, 20 million tons coarse grains, 10 million tons either wheat, coarse grains, soybeans, or meal 4/	NA
Flexibility	In any year USSR can substitute up to 750,000 tons of one grain for the other, but the substitutions cannot exceed 1.5 million tons over the life of the agreement	NA
Maximum purchase without consultation	14 million tons wheat and coarse grains	12 million tons wheat and corn
Pricing	"Competitive prices"	"Prevailing market price"

1/ Agreement yet to be signed. 2/ Could be calendar, marketing, or fiscal years. 3/ Coarse grains include corn, sorghum, and barley. 4/ 1 ton of soy=2 tons of grain. NA=not applicable.

The Soviets continue to stress their program of more and better use of intensive technology (IT) as the panacea for grain production. In 1989, over 43 million hectares of grain reportedly were cultivated under IT, up from about 39 million the year before (1 hectare equals 2.47 acres). IT involves improving the application of fertilizers and pesticides to crops and using more careful soil management. IT is optimistically targeted to include about 50 million hectares of grain this year, over 60 million by 1995, and as much as 80 million by 2000.

To the dismay of planners, total Soviet grain area has consistently fallen in recent years, primarily because farmers switched to forage crops. Clean summer fallow area may currently be at an optimum size, about 21 million hectares, according to some Soviet officials. But 1989 total grain area was the lowest in at least 35 years—112 million hectares—according to USDA estimates. The Soviet deputy chairman of the Commission for Food and Procurements says grain area needs to rebound to 119–120 million by 1992–93, an improbable goal.

Soviet analysts and policymakers agree that the structure of grain crops should be altered, and corn area expanded in particular. Unrealistic plans have called for corn to be cultivated on 5–7 million hectares and corn output to reach 20–22 million tons by the end of this year. Corn output in 1989 was an estimated 16 million tons, from an area of 4.5 million hectares. Policymakers also want more area sown to pulses to improve the quality of feed supplies.

For food grains, the Soviets are placing the greatest priority on raising area planted to durum and quality hard wheat, buckwheat, and millet. Planners are trying to cut area sown to oats, spring barley, and poor quality spring wheat. Some Soviets believe that it would also be economical to de-emphasize rice output, opting instead for bigger imports.

Soviet authorities repeatedly emphasize that proportionally greater grain losses have always been associated with higher grain output. So, sharp increases in investment to upgrade the rural infrastructure and the grain milling and mixed-feed sector are seen as a remedy for persistent grain losses.

Plans call for constructing thousands of miles of new roads, especially in the New Lands (east of the Urals); expanding and improving rail lines; raising covered railcar output; increasing regional grain storage capacity; modernizing elevators; improving the supplies and efficiency of harvesting, cleaning, and drying equipment; and retooling milling facilities and mixed-feed operations. These goals probably will not be met in the 1990's.

### 1990 Winter Grain Prospects Good

As of mid-April, prospects for 1990 winter grain crops appear at least as good as last year's record-yielding crop. Soviet seeding progress reports indicate, however, that the area sown to 1990 winter grains could be down slightly from last year, when seeded area was estimated at 34.5 million hectares.

An unusually mild 1989/90 winter in the European USSR is believed to have kept winterkill well below average so far this year, according to one Soviet report. The Soviets report that winterkill on average requires resowing of 6–7 million hectares annually, with an average 18 percent of area killed during 1976–80, 16 percent during 1981–85, 19 percent in 1986, and 20 percent in 1987.

USDA expects that domestic use of grain in the USSR will reach a record 246 million tons in 1989/90, up 5 percent from 1988/89. The chairman of the Soviet Commission for Food and Procurement placed total grain use at 250 million tons in a

## The USSR Depends on Imports 1/

Year beginning July 1	Produc- tion 2/ July 1	Trade		Avail- ability	Utilization						Stock change 3/ July 1				
		Imports	Exports		Seed	Indus- trial	Food	Dockage- waste	Feed	Total					
Million metric tons															
<b>TOTAL GRAINS 4/</b>															
Averages															
1976/77-80/81	205.0	22.3	2.0	225	26	6	46	28	121	225	0				
1981/82-85/86	180.3	39.9	0.5	220	25	5	47	19	121	216	4				
1986/87	210.1	27.5	0.5	237	25	5	47	23	130	230	7				
1987/88	211.4	32.0	0.5	243	25	5	47	30	132	239	4				
1988/89	195.0	39.0	0.5	234	25	5	48	22	135	235	-1				
1989/90 5/	211.1	38.0	0.5	248	25	5	48	26	142	246	2				
<b>WHEAT</b>															
Averages															
1976/77-80/81	90.7	8.9	1.0	108	13	2	35	14	43	107	1				
1981/82-85/86	77.9	21.0	0.5	99	11	2	36	8	39	96	3				
1986/87	92.3	16.0	0.5	108	11	1	36	10	45	103	5				
1987/88	83.3	21.5	0.5	104	11	1	36	13	40	101	3				
1988/89	84.4	15.5	0.5	99	11	1	37	10	41	100	-1				
1989/90 5/	90.5	14.0	1.0	104	11	1	37	11	42	102	2				
<b>COARSE GRAINS 6/</b>															
Averages															
1976/77-80/81	94.9	12.8	1.0	107	11	4	7	13	73	108	-1				
1981/82-85/86	90.7	18.0	0	109	13	3	7	9	76	108	1				
1986/87	105.9	11.0	0	117	13	4	7	11	80	115	2				
1987/88	113.7	10.0	0	124	13	4	7	15	84	123	1				
1988/89	97.5	23.0	0	121	13	4	7	11	86	121	0				
1989/90 5/	107.0	23.0	0	130	13	4	7	13	93	130	0				

1/ All are USDA estimates and forecasts except production. Rounded to the nearest million tons, except for production and trade data. Totals may not add because of rounding. 2/ Calendar year basis. 3/ Difference between availability and total use. 4/ Includes wheat, coarse grains, buckwheat, rice, pulses, and miscellaneous grains. 5/ USDA estimate as of April 10. 6/ Includes rye, barley, oats, corn, sorghum, and millet.

speech before the Politburo last November. Record use of grain for feed, estimated at 142 million tons, primarily accounts for the growth in total use.

According to Soviet sources, about 140 million tons of grain are used in the livestock sector annually, with 65-75 percent of that going to the production of mixed feeds. The combination of increased coarse grain output, large feed grain imports, bigger quantities of grain held on-farm, and pressure from Moscow to raise livestock output underlies the record feed use estimate for 1989/90.

Feed use of wheat, which USDA estimates at 42 million tons in 1989/90, is said to equal 45 million tons on average, according to a Soviet report. Moreover, about a third of the wheat fed is reportedly of milling quality. A senior Soviet agricultural economist estimates that 13-16 million tons of high-quality hard wheat and 1.3-1.5 million of durum are fed to livestock in the USSR each year.

USDA projects food use of grain to be unchanged at 48 million tons this year, slightly less than the 50-60 million tons cited in several Soviet reports. Estimated seed and industrial use of grain also is unchanged, while a small amount of on-farm stock building is forecast because farmers have reduced grain sales to the state. Dockage and waste are estimated at 26 million tons (12 percent of output).

### Farmers Lukewarm Toward "Convertible" Rubles

Despite a 16-million-ton rise in total grain output in 1989, state grain procurement as a share of total grain output was less than 30 percent, the lowest in over 30 years. While procurement plans call for about 86 million tons, total farm sales of grain to the state in 1989 were only 59.5 million, the lowest since the disastrous 1984 crop.

## Special Article

Serious domestic price distortions, the falling purchasing power of the ruble, and the growing autonomy of farm managers and the republics largely account for the continued drop in grain sales. These factors are not likely to improve dramatically in 1990 without marked policy changes.

Although 1989 coarse grain output was estimated up about 7 million tons, sales of feed grains to the state last year were estimated at 17.5 million—about 3 million less than in 1988, and more than 13 million below sales in 1987.

State procurements of wheat in 1989 likely were about the same as 1988's 35-million-ton total, despite an estimated 6-million-ton increase in production and a procurement target of 49 million. The state tried in 1989 to raise procurement by offering farmers special rubles convertible to hard currencies for above-average sales of quality wheat. Nevertheless, 1989 procurement of quality wheat was estimated at just under 25 million tons, actually below 1988.

As of January 1, 1990, reported sales of quality wheat to the state for convertible rubles amounted to about 225,000 tons, far below the 10-15 million tons hoped for by the state. Over 700 million hard rubles have been allocated for purchasing wheat from Soviet producers, but as of January only about 11 million were to be paid out.

The weak response to the new measure reflects the delay in introducing the program, the poor implementation and administration of the measure, continued distrust by farmers, inadequate price incentives, and excessive restrictions connected with spending the hard ruble earnings.

Soviet grain procurement policy is likely to undergo significant changes in the year ahead. Some of the key issues under discussion include:

- setting national procurement plans for food grains only, and switching to republic-level self-sufficiency for feed grains;
- sharply reducing the number of price zones, thereby stimulating production in areas with the most favorable natural and economic conditions;
- eliminating all quantity bonuses connected with sales to the state; and
- sharply raising procurement prices.

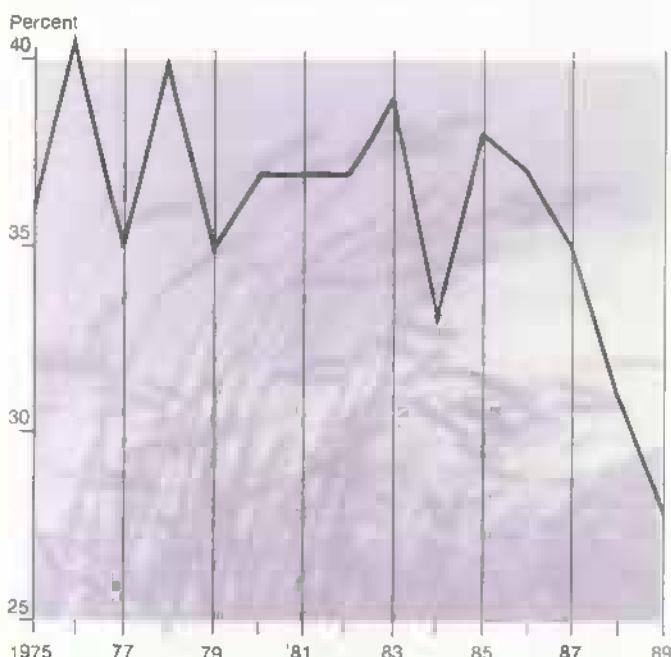
### ***Oilseed Imports To Continue***

For oilseeds, the USSR's dependence on imports is unlikely to diminish significantly in the next year, even if 1990 output surpasses 1989's record production of over 13 million tons.

Growth in Soviet oilseed production in the 1990's probably will come primarily from higher yielding sunflowerseed crops and expanding area sown to rapeseed and soybeans.

Domestic production of oilseed meal in 1990 is forecast to be up about 4 percent from 1989's high of about 5 million tons in

Share of Soviet Grain Sold to the State Plummets



### ***Soviet Economic Reform?***

Although Soviet politicians have been holding serious discussions on economic reform, and specific laws concerned with economics recently have been approved by the reconstituted Supreme Soviet, the impact on agriculture has been very limited to date.

While much has been written about reform of the trade laws, private land ownership, the banking system, wages, the monetary system, taxes, and cooperatives, very little progress has actually taken place in these areas.

The government continues to postpone addressing the critical issue of price reform. Since the fall of 1989, the state has adopted new legislation on leasing, land, and property, which on paper offers opportunities to improve efficiency in the countryside. However, the barriers to making reforms remain insurmountable. State and collective farms continue to dominate agricultural operations, and land sales are still prohibited.

soybean meal equivalent (sbme). Increased oilseed output in 1989 and slightly larger imports expected in 1989/90 should account for the rise. However, domestic output still will fall well short of filling the country's feed-protein deficit, estimated by the Soviets to be 5-6 million tons of digestible protein (about 10-15 million tons in sbme).

To raise the share of protein meal in mixed feeds, the state likely will continue imports of soybean meal. Currently, Soviet

## Special Article

**USSR Oilseed Output Rebounds,  
But Still Short of Domestic Needs\***

Year	Sunflower-seed	Cotton-seed	Soy-bean	Rape-seed	Other	Total
1,000 metric tons						
Averages						
1971-75	5,974	4,349	471	8	234	11,036
1976-80	5,309	4,656	529	14	193	10,701
1981-85	4,974	4,843	504	55	171	10,547
1986	5,258	4,870	703	110	157	11,098
1987	6,075	4,485	712	296	183	11,731
1988	6,157	4,870	880	420	176	12,503

\*Cottonseed is USDA estimate. "Other" does not include oilseeds from fiber flax and hemp. Total is UN estimate.

officials say that mixed feeds are only about 5 percent oilseed meal, far short of levels deemed optimal in most western countries.

Moreover, the protein-deficient nature of Soviet mixed feeds leads to overfeeding about 25 million tons of grain per year, again according to Soviet authorities. Debate continues to grow in the USSR on the economic rationale and feasibility of importing larger volumes of soymeal instead of continued massive imports of feed grains.

Soviet output of vegetable oil in 1990 also should be up from 1989's record high, which was estimated at 3.2 million tons, because of larger oilseed supplies. Nevertheless, domestic oil production is not likely to reach the Food Program target of 4.3 million tons.

Furthermore, while vegetable oil consumption in 1990 could reach as high as 10.5 kilograms per capita, it still would fall far short of the 13.2 kilograms per capita targeted by the Food Program. The planned increase in oil consumption would take the form of more margarine products and mayonnaise.

### **Authorities Pressing for More Oilseed Production**

Despite currently inadequate supplies of protein meal and vegetable oil, and continued slow growth in domestic oilseed production, Soviet planners keep pressing for self-sufficiency. They recall earlier plans to push oilseed output (including cottonseed) to about 16 million tons by the end of this year.

According to a senior economist with the state planning authority, the USSR could produce up to 20 million tons of oilseeds annually, which reportedly would permit closing the vegetable oil gap and yield 14-15 million tons of oilmeal per year.

This goal, however, remains out of reach for the foreseeable future. It means that sunflowerseed output would have to rise to about 9 million tons (nearly 30 percent over 1989) and soybeans to 2.5 million tons (about 150 percent over 1989). Rape-

seed output would have to nearly triple to 1.5 million, and cottonseed to rise about 20 percent.

Near-term increases in oilseed output likely will arise from:

- marginal expansion of sunflowerseed area, combined with improved, higher yielding seed varieties,
- further dramatic growth in both rapeseed area and yields, and
- steady growth in soybean area, accompanied by marginal increases in yields.

According to one Soviet report, it may take the next decade for soybean area to double and approach 2 million hectares, and then only through the increased use of soybeans in crop rotations in the Ukraine, Kazakhstan, the Volga Valley, and Moldavia. Little if any growth is forecast for cottonseed area or yields in the near term. (Christian J. Foster (202) 786-1621) AO

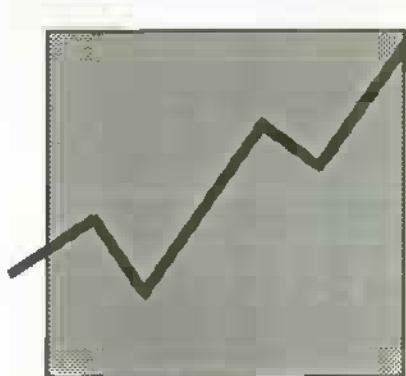
### **Upcoming Releases From the Agricultural Statistics Board**

The following list gives the release dates of the major Agricultural Statistics Board reports that will be issued by the time the next *Agricultural Outlook* comes off press.

#### **May**

2	Egg Products
3	Poultry Slaughter
4	Dairy Products
	Dairy Products-Annual
8	Celery
	Milk Prod., Disp., & Income
9	Vegetables
10	Crop Production
11	Farm Labor
15	Milk Production
	Turkey Hatchery
16	Potato Stocks
17	Cattle on Feed
21	Catfish
	Sugar Market Statistics
23	Eggs, Chickens, & Turkeys
25	Cold Storage
	Livestock Slaughter
30	Peanut Stocks & Processing
31	Agricultural Prices

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# Statistical Indicators

## Summary Data

Table 1.—Key Statistical Indicators of the Food & Fiber Sector

	1989				1990				
	II	III	IV	Annual	I F	II F	III F	IV F	Annual F
Prices received by farmers (1977=100)	148	145	147	148	151	142	139	136	142
Livestock & products	156	159	166	160	168	158	156	153	159
Crops	141	130	126	135	134	126	122	117	125
Prices paid by farmers, (1977=100)									
Production items	166	166	165	165	168	—	—	—	168
Commodities & services, interest, taxes, & wages	177	178	178	177	180	—	—	—	180
Cash receipts (\$ bil.) 1/	160	164	151	158	170	189	188	148	160-166
Livestock (\$ bil.)	81	82	86	83	93	82	80	80	83-85
Crops (\$ bil.)	79	82	85	74	76	87	87	86	78-82
Market basket (1982-84=100)									
Retail cost	124	125	127	125	—	—	—	—	—
Farm value	108	107	108	107	—	—	—	—	—
Spread	133	135	137	134	—	—	—	—	—
Farm value/retail cost (%)	30	30	30	30	—	—	—	—	—
Retail prices (1982-84=100)									
Food	125	126	127	125	131	—	—	—	—
At home	124	125	126	124	131	—	—	—	—
Away from home	127	128	130	127	131	—	—	—	—
Agricultural exports (\$ bil.) 2/	9.8	8.8	10.8	39.7	10.3	8.8	8.8	—	38.5
Agricultural imports (\$ bil.) 2/	5.5	5.0	5.4	21.5	5.9	5.4	4.8	—	21.5
Commercial production									
Red meat (mil. lb.)	9,870	9,848	10,105	39,418	9,586	9,762	9,840	10,148	39,336
Poultry (mil. lb.)	5,539	5,704	5,726	22,038	5,570	5,940	6,020	6,005	23,535
Eggs (mil. doz.)	1,394	1,389	1,415	5,587	1,385	1,410	1,410	1,450	5,655
Milk (bil. lb.)	37.7	35.2	34.9	144.3	36.6	38.6	36.2	35.6	146.0
Consumption, per capita									
Red meat & poultry (lb.)	54.6	55.3	57.5	220.3	53.8	54.9	55.8	58.1	222.4
Corn beginning stocks (mil. bu.) 3/	5,203.9	3,419.0	1,930.0	4,259.1	7,079.2	4,813.0	—	—	1,930.4
Corn use (mil. bu.) 3/	1,785.8	1,489.3	2,378.1	7,260.2	2,267.0	—	—	—	—
Prices 4/									
Choice steers—Omaha (\$/cwt.)	73.85	70.09	72.46	72.52	77.18	70-76	68-74	71-77	71-77
Barrows & gilts—7 mkt. (\$/cwt.)	41.84	46.07	47.42	44.03	49.55	52-58	51-57	43-49	48-54
Broilers—12-city (cts./lb.)	87.1	59.7	49.8	59.0	56.5	55-61	55-61	46-52	52-58
Eggs—NY gr. A large (cts./doz.)	75.2	81.5	92.6	81.9	87.8	74-80	65-71	63-69	72-78
Milk—all at plant (\$/cwt.)	12.27	13.27	15.43	13.51	14.63	11.15	10.90	11.60	11.95
Wheat—KC HRW ordinary (\$/bu.)	4.44	4.31	4.34	4.35	4.16	—	—	—	—
Corn—Chicago (\$/bu.)	2.78	2.49	2.36	2.55	2.42	—	—	—	—
Soybeans—Chicago (\$/bu.)	7.39	6.71	5.70	6.70	5.70	—	—	—	—
Cotton—Avg. spot mkt. (cts./lb.)	63.1	68.6	67.1	63.74	65.07	—	—	—	—
	1982	1983	1984	1985	1986	1987	1988	1989	1990 F
Gross cash income (\$ bil.)	150.6	150.4	155.3	156.9	152.5	162.0	171.6	174	176-182
Gross cash expenses (\$ bil.)	112.8	113.5	116.6	110.2	100.7	107.5	114.4	121	121-123
Net cash income (\$ bil.)	37.8	36.9	38.7	46.7	51.8	54.5	57.2	53	54-58
Net farm income (\$ bil.)	23.5	12.7	32.2	32.4	38.0	43.6	42.7	49	45-49
Farm real estate values 5/									
Nominal (\$ per acre)	823	788	801	713	640	599	632	687	705-720
Real (1977 \$)	513	472	459	395	346	317	322	325	328-334

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated. 3/ Dec.-Feb. first quarter Mar.-May second quarter; June-Aug. third quarter; Sept.-Nov. fourth quarter; Sept.-Aug. annual. Use includes exports & domestic disappearance. 4/ Simple averages. 5/ 1981 & 1986-89 values as of February 1. 1982-85 values as of April 1. F = forecast. — = not available.

## U.S. and Foreign Economic Data

**Table 2.—U.S. Gross National Product & Related Data**

	Annual			1988		1989			
	1987	1988	1989 R	IV	I	II	III	IV R	
	\$ billion (quarterly data seasonally adjusted at annual rates)								
Gross national product	4,524.3	4,880.6	5,234.0	5,017.3	5,113.1	5,201.7	5,291.0	5,340.2	
Personal consumption expenditures	3,010.8	3,235.1	3,471.1	3,324.0	3,381.4	3,444.1	3,508.1	3,550.6	
Durable goods	421.0	455.2	473.2	467.4	466.4	471.0	486.1	469.5	
Nondurable goods	998.1	1,052.3	1,123.4	1,078.4	1,098.3	1,121.5	1,131.4	1,142.4	
Clothing & shoes	177.2	188.8	200.1	183.9	195.0	198.9	202.2	204.3	
Food & beverages	529.2	550.7	564.9	574.1	587.3	592.2	598.1	601.8	
Services	1,591.7	1,727.6	1,874.4	1,778.2	1,816.7	1,851.7	1,890.6	1,938.7	
Gross private domestic investment	899.9	750.3	773.4	752.8	769.6	775.0	779.1	770.1	
Fixed Investment	670.6	719.6	746.3	734.1	742.0	747.6	751.7	744.0	
Change in business inventories	29.3	30.8	27.1	18.7	27.7	27.4	27.4	28.1	
Net exports of goods & services	-112.6	-73.7	-47.1	-70.8	-54.0	-50.6	-45.1	-38.8	
Government purchases of goods & services	928.1	968.9	1,036.6	1,011.4	1,018.0	1,033.2	1,038.9	1,058.3	
1982 \$ billion (quarterly data seasonally adjusted at annual rates)									
Gross national product	3,853.7	4,024.4	4,144.1	4,069.4	4,106.8	4,132.5	4,162.9	4,174.1	
Personal consumption expenditures	2,513.7	2,598.4	2,669.6	2,627.7	2,641.0	2,653.7	2,690.1	2,693.7	
Durable goods	389.6	413.6	425.2	420.5	419.3	424.9	438.4	420.3	
Nondurable goods	890.4	904.5	916.7	912.0	915.0	909.7	920.8	921.1	
Clothing & shoes	159.6	161.3	168.9	164.6	165.0	165.8	173.3	171.5	
Food & beverages	452.7	460.0	462.8	462.1	466.0	461.4	463.2	460.5	
Services	1,233.7	1,280.2	1,327.7	1,295.2	1,306.7	1,319.0	1,332.9	1,352.2	
Gross private domestic investment	674.0	715.8	728.7	709.1	721.1	719.8	724.6	717.3	
Fixed investment	650.3	687.9	698.8	690.8	696.6	700.7	702.7	695.1	
Change in business inventories	23.7	27.9	21.9	18.3	24.5	19.1	21.9	22.2	
Net exports of goods & services	-115.7	-74.9	-52.6	-73.8	-55.0	-51.2	-57.1	-47.2	
Government purchases of goods & services	781.8	785.1	806.4	806.4	799.7	810.3	805.3	810.4	
GNP implicit price deflator (% change)	3.2	3.3	4.1	4.7	4.0	4.6	3.2	3.2	
Disposable personal income (\$ bil.)	3,205.9	3,477.8	3,778.8	3,587.4	3,689.5	3,747.7	3,808.8	3,871.3	
Disposable per. income (1982 \$ bil.)	2,678.6	2,793.2	2,906.3	2,835.9	2,881.7	2,887.8	2,919.2	2,936.9	
Per capita disposable per. income (\$)	13,140	14,116	15,186	14,504	14,884	15,084	15,280	15,495	
Per capita dis. per. income (1982 \$)	10,970	11,337	11,680	11,466	11,625	11,822	11,717	11,755	
U.S. population, total, incl. military abroad (mil.)	243.9	248.4	248.8	247.3	247.9	248.5	249.1	249.8	
Civilian population (mil.)	241.7	244.1	246.6	245.1	245.7	246.2	246.9	247.4	
	Annual			1989			1990		
	1987	1988	1989 P	Feb	Nov	Dec	Jan	Feb P	
Monthly data seasonally adjusted									
Industrial production (1977=100)	129.8	137.2	141.8	140.5	142.3	142.4	141.0	141.8	
Leading economic indicators (1982=100)	140.1	142.8	144.9	145.6	144.5	145.1	145.4	144.0	
Civilian employment (mil. persons)	112.4	115.0	117.3	116.8	117.8	117.9	117.9	118.0	
Civilian unemployment rate (%)	6.1	5.4	5.2	5.1	5.3	5.3	5.2	5.2	
Personal Income (\$ bil. annual rate)	3,777.6	4,064.5	4,427.3	4,319.5	4,541.5	4,584.1	4,595.3	4,635.9	
Money stock—M2 (daily avg.) (\$ bil.) 1/	2,913.2	3,072.4	3,221.7	3,078.2	3,200.8	3,221.7	3,231.9	3,257.2	
Three-month Treasury bill rate (%)	5.82	6.69	8.12	8.48	7.65	7.64	7.64	7.78	
AAA corporate bond yield (Moody's) (%)	9.38	9.71	9.26	9.64	8.89	8.86	8.99	9.22	
Housing starts (1,000) 2/	1,821	1,488	1,376	1,454	1,347	1,273	1,588	1,477	
Auto sales at retail, total (mil.)	10.3	10.6	8.9	8.8	8.5	8.9	10.2	9.5	
Business inventory/sales ratio	1.51	1.50	1.51	1.50	1.53	1.52	1.52	—	
Sales of all retail stores (\$ bil.)	152.1	182.9	171.1	139.5	144.1	143.9	147.9 P	148.5	
Nondurable goods stores (\$ bil.)	94.9	100.1	106.2	86.4	90.3	91.0	91.4 P	91.7	
Food stores (\$ bil.)	31.5	33.2	35.5	29.0	30.2	30.3	30.4 P	30.6	
Eating & drinking places (\$ bil.)	14.8	15.8	18.5	13.6	13.0	13.7	14.0 P	14.2	
Apparel & accessory stores (\$ bil.)	7.8	8.2	8.8	7.0	7.5	7.4	7.4 P	7.5	

1/ Annual data as of December of the year listed. 2/ Private, including farm. P = preliminary. R = revised. — = not available.

Information contact: Ann Duncan (202) 788-3313.

**Table 3.—Foreign Economic Growth, Inflation, & Export Earnings**

	1981	1982	1983	1984	1985	1986	1987	1988	1989 P	1990 F	1991 F	Average 1980-89
Annual percent change												
World, less U.S.												
Real GDP	1.5	0.6	2.0	4.5	3.6	3.0	3.6	3.8	2.9	2.4	2.9	2.8
Consumer prices	15.0	13.7	14.3	11.8	11.3	8.0	10.0	15.0	28.9	17.8	8.4	14.4
Merch. exports	-2.7	-6.7	-2.7	5.1	0.1	12.9	18.5	13.1	8.1	10.4	9.9	6.6
Developed less U.S.												
Real GDP	1.2	0.2	2.2	4.8	3.5	2.7	3.4	3.9	3.8	2.7	3.2	2.7
Consumer prices	10.0	7.8	5.6	4.7	4.2	2.5	2.8	3.3	4.4	4.0	3.8	5.7
Merch. exports	-3.2	-4.4	-0.5	6.9	4.6	19.4	17.7	12.4	5.3	11.6	10.2	7.5
Developing												
Real GNP	2.0	1.8	1.5	4.0	3.8	3.7	4.5	5.7	3.5	3.7	4.7	3.5
Consumer prices	28.4	30.0	39.5	35.1	35.3	28.7	35.5	59.7	85.8	50.6	19.2	40.4
Merch. exports	-1.8	-10.4	-8.5	2.9	-8.2	-0.9	20.7	14.8	11.8	8.4	10.6	4.8
Asia, incl. China												
Real GDP	6.1	5.5	7.7	7.3	7.0	6.1	7.0	9.2	6.3	6.0	8.2	6.8
Consumer prices	9.3	5.8	6.2	6.7	7.2	5.6	7.4	11.8	6.5	8.2	10.4	7.9
Merch. exports	7.6	-0.5	4.6	14.6	-0.9	9.4	29.4	23.1	13.2	9.9	12.6	12.8
Latin America												
Real GDP	-0.4	-1.5	-2.8	3.3	3.4	3.6	3.1	1.0	1.1	1.4	2.9	1.7
Consumer prices	80.1	73.6	118.9	118.5	127.7	82.4	116.2	218.1	352.8	304.3	81.2	132.1
Merch. exports	6.5	-10.6	-1.0	6.7	-7.6	-14.6	9.0	18.0	10.1	6.8	7.5	4.5
Africa												
Real GDP	-1.9	0.6	0.0	-0.3	3.9	1.0	1.3	2.2	2.4	2.6	2.3	1.6
Consumer prices	23.4	14.1	19.7	19.1	11.9	12.2	12.6	18.0	22.3	14.6	13.1	16.8
Merch. exports	-19.7	-9.1	-8.0	3.4	0.9	-22.0	17.8	-8.2	15.3	4.8	7.6	0.5
Middle East												
Real GDP	2.7	3.7	0.5	1.0	-1.8	2.0	1.5	1.4	6.0	4.4	4.7	1.7
Consumer prices	16.8	14.0	14.5	19.6	13.8	12.1	12.9	19.6	21.4	18.0	17.8	16.2
Merch. exports	-3.8	-21.1	-22.2	-10.5	-30.7	8.7	16.6	0.1	29.4	6.6	8.5	-1.1
Eastern Europe, incl. USSR												
Real GDP	—	—	—	2.3	1.6	2.8	1.1	1.8	0.3	-0.4	0.1	1.6
Consumer prices	—	—	—	—	10.8	13.6	19.2	32.0	255.5	144.2	27.1	66.4
Merch. exports	—	—	—	—	-8.1	-3.2	12.8	7.0	2.2	6.5	4.6	2.3

P = preliminary. F = forecast. — = not available.

Information contact: Alberto Jerardo, (202) 786-1705.

## Farm Prices

**Table 4.—Indexes of Prices Received & Paid by Farmers, U.S. Average**

	Annual			1989				1990		
	1987	1988	1989	Mar	Oct	Nov	Dec	Jan	Feb R	Mar P
1977=100										
Prices received										
All farm products	127	138	148	150	145	147	149	154	152	154
All crops	106	126	135	138	128	128	127	136	133	134
Food grains	103	138	156	162	152	150	153	151	145	140
Feed grains & hay	85	120	128	138	118	118	119	120	120	121
Feed grains	81	117	123	132	112	113	114	115	115	115
Cotton	99	95	98	92	109	108	102	99	100	103
Tobacco	129	133	144	143	148	144	144	144	144	144
Oil-bearing crops	79	106	102	114	87	89	90	91	90	91
Fruit, all	182	184	190	173	208	208	182	166	172	184
Fresh market 1/	196	196	200	180	221	219	188	169	171	185
Commercial vegetables	146	144	156	154	143	139	149	253	225	214
Fresh market	147	137	145	144	132	128	134	242	210	203
Potatoes & dry beans	128	124	187	191	138	168	178	184	192	214
Livestock & products	148	150	160	161	162	165	170	172	169	173
Meat animals	163	188	174	175	174	175	180	185	188	193
Dairy products	129	126	139	137	151	160	166	162	148	142
Poultry & eggs	107	118	138	150	129	134	136	139	131	145
Prices paid										
Commodities & services,										
Interest, taxes, & wage rates	182	189	177	—	178	—	—	180	—	—
Production items										
Feed	147	157	185	—	185	—	—	166	—	—
Feeder livestock	103	128	135	—	128	—	—	128	—	—
Seed	179	192	194	—	196	—	—	205	—	—
Fertilizer	148	150	165	—	170	—	—	170	—	—
Agricultural chemicals	124	126	132	—	134	—	—	134	—	—
Fuels & energy	181	163	180	—	183	—	—	200	—	—
Farm & motor supplies	145	148	155	—	165	—	—	156	—	—
Autos & trucks	208	215	223	—	225	—	—	225	—	—
Tractors & self-propelled machinery	174	181	193	—	199	—	—	199	—	—
Other machinery	185	197	208	—	210	—	—	210	—	—
Building & fencing	137	138	141	—	143	—	—	143	—	—
Farm services & cash rent	146	147	158	—	158	—	—	183	—	—
Int. payable per acre on farm real estate debt	189	182	177	—	177	—	—	178	—	—
Taxes payable per acre on farm real estate	144	148	152	—	152	—	—	158	—	—
Wage rates (seasonally adjusted)	166	171	185	—	179	—	—	179	—	—
Production items, interest, taxes, & wage rates	151	180	187	—	166	—	—	169	—	—
Ratio, prices received to prices paid (%) 2/	79	82	84	86	81	83	84	86	84	86
Prices received (1910-14=100)	578	632	674	684	682	672	681	705	693	703
Prices paid, etc. (parity index) (1910-14=100)	1,111	1,185	1,220	—	1,224	—	—	1,241	—	—
Parity ratio (1910-14=100) (%2/)	52	54	55	—	54	55	56	56	—	—

1/ Fresh market for noncitrus; fresh market & processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities & services, interest, taxes, & wage rates. Ratio uses the most recent Prices Paid Index. Prices paid data are quarterly & will be published in January, April, July, & October. R = revised. P = preliminary. — = not available.

Information contact: Ann Duncan (202) 786-3313.

Table 5.—Prices Received by Farmers, U.S. Average

	Annual 1/			1989				1990		
	1987	1988	1989 P	Mar	Oct	Nov	Dec	Jan	Feb R	Mar P
<b>CROPS</b>										
All wheat (\$/bu.)	2.57	3.72	3.80-3.90	4.07	3.75	3.71	3.80	3.71	3.56	3.42
Rice, rough (\$/cwt)	7.27	6.83	7.00-8.00	6.80	7.54	6.94	6.95	7.40	7.52	7.60
Corn (\$/bu.)	1.94	2.54	2.20-2.40	2.00	2.22	2.24	2.27	2.31	2.32	2.34
Sorghum (\$/cwt)	3.04	4.05	3.57-3.93	4.04	3.61	3.68	3.53	3.58	3.54	3.62
All hay, baled (\$/ton)	64.76	86.74	—	96.90	85.70	83.00	84.20	85.00	85.00	88.50
Soybeans (\$/bu.)	5.88	7.42	5.35-5.65	7.51	5.28	5.64	5.64	5.85	5.57	5.58
Cotton, upland (cts./lb.)	64.3	56.6	5/ 67.3	55.6	64.1	65.6	61.4	59.8	60.6	62.4
Potatoes (\$/cwt)	4.38	6.02	6.85	7.34	4.97	6.55	7.02	7.15	7.40	8.48
Lettuce (\$/cwt)	14.70	14.70	13.60	12.90	14.50	13.30	7.08	10.30	7.15	6.84
Tomatoes, fresh (\$/cwt)	26.00	26.90	31.80	34.10	29.00	26.20	40.30	118.00	97.60	82.00
Onions (\$/cwt)	12.50	9.72	10.70	9.68	11.40	11.30	12.40	11.60	15.70	19.90
Dry edible beans (\$/cwt)	18.50	29.80	27.90	32.50	25.40	27.70	27.80	30.00	32.70	32.80
Apples for fresh use (cts./lb.)	12.7	17.4	—	16.6	15.8	13.4	12.2	12.5	13.0	12.0
Pears for fresh use (\$/ton)	227.00	358.00	380.00	368.00	387.00	369.0	351.00	349.00	389.0	420.00
Oranges, all uses (\$/box) 2/	5.40	7.18	6.89	5.98	6.22	6.47	5.63	4.70	4.93	5.33
Grapefruit, all uses (\$/box) 2/	4.96	5.43	4.50	3.81	8.18	5.54	5.18	4.62	4.68	6.23
<b>LIVESTOCK</b>										
Beef cattle (\$/cwt)	61.40	66.80	69.70	72.00	67.40	69.80	71.00	73.70	74.60	75.40
Calves (\$/cwt)	78.10	89.90	91.90	94.00	90.20	86.70	89.10	91.00	98.00	98.30
Hogs (\$/cwt)	50.80	42.50	43.20	39.30	46.80	45.00	48.20	47.30	48.20	52.00
Lambs (\$/cwt)	77.90	69.50	67.30	72.50	63.10	58.70	59.00	56.40	59.80	65.10
All milk, sold to Plants (\$/cwt)	12.54	12.24	13.51	12.70	14.50	15.50	16.10	15.70	14.40	13.80
Milk, manuf. grade (\$/cwt)	11.37	11.15	12.47	11.30	13.60	14.80	15.10	14.20	12.50	12.20
Broilers (cts./lb.) 3/	28.3	34.0	36.4	38.7	30.6	29.8	28.6	30.7	33.5	36.4
Eggs (cts./doz.) 3/	53.1	53.2	69.6	80.1	71.3	78.6	82.8	83.8	70.4	79.3
Turkeys (cts./lb.)	34.3	36.9	40.2	40.0	38.5	40.9	39.6	35.9	33.7	37.2
Wool (cts./lb.) 4/	91.7	138.0	122.0	130.0	133.0	102.0	94.0	65.8	70.6	83.4

1/ Season average price by crop year for crops. Calendar year average of monthly prices for livestock. 2/ Equivalent on-tree returns. 3/ Average of all eggs sold by producers including hatching eggs & eggs sold at retail. 4/ Average local market price, excluding incentive payments. 5/ Weighted average of first 5 months of the season - not a projection for 1989/90. P = preliminary. R = revised. — = not available.

Information contact: Ann Duncan (202) 788-3313.

## Producer & Consumer Prices

Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)

	Annual		1989						1990	
	1989	Feb	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
1982-84=100										
Consumer Price Index, all items	124.0	121.6	124.4	124.6	125.0	125.6	125.9	126.1	127.4	128.0
Consumer Price Index, less food	123.7	121.3	124.2	124.3	124.8	125.4	125.6	125.8	126.7	127.3
All food	125.1	122.0	125.5	125.8	126.1	126.5	126.9	127.4	130.4	131.3
Food away from home	127.4	125.2	127.8	128.1	128.8	129.1	129.5	129.0	130.3	131.0
Food at home	124.2	122.0	124.8	124.9	125.0	125.4	125.8	126.5	131.0	132.1
Meats 1/	118.7	114.3	116.7	117.5	117.7	118.1	119.3	120.0	122.3	123.5
Beef & veal	119.3	116.6	119.5	119.7	120.0	120.0	121.3	122.1	124.5	126.2
Pork	113.2	110.9	113.6	114.8	114.3	114.9	97.7	117.2	119.7	119.7
Poultry	132.7	128.4	138.1	138.2	134.0	131.2	126.8	127.8	128.8	130.5
Fish	143.6	142.9	142.3	145.2	148.0	143.9	142.0	143.0	149.0	150.6
Eggs	118.5	106.1	112.8	115.2	124.6	122.9	129.4	134.9	143.9	124.7
Dairy products 2/	115.6	113.4	114.1	114.5	116.1	118.2	120.2	122.0	125.8	126.9
Fats & oils 3/	121.2	120.5	121.6	121.7	121.3	121.6	121.0	121.8	123.5	123.4
Fresh fruit	152.4	150.0	150.8	151.4	155.1	156.6	152.7	154.8	171.4	170.3
Processed fruit	125.9	125.5	126.0	126.9	127.8	127.1	126.6	125.2	125.1	131.0
Fresh vegetables	143.1	144.4	150.8	145.1	133.9	134.8	141.9	136.5	178.9	188.3
Potatoes	153.5	133.3	180.7	182.3	153.1	139.8	135.0	140.0	150.1	160.1
Processed vegetables	124.2	121.8	126.3	125.9	125.0	124.6	123.8	124.8	125.4	126.3
Cereals & bakery products	132.4	128.9	133.3	134.1	134.6	135.0	135.3	136.1	136.9	137.4
Sugar & sweets	119.4	117.8	120.1	120.6	120.8	121.3	120.7	121.1	122.5	122.9
Beverages, nonalcoholic	111.3	111.3	112.3	111.2	111.0	111.8	111.2	111.0	112.4	113.3
Apparel										
Apparel, commodities less footwear	117.1	113.4	112.8	112.8	118.0	121.8	121.1	117.8	114.6	119.0
Footwear	114.4	112.7	113.4	112.6	114.1	117.6	116.6	114.7	113.1	114.5
Tobacco & smoking products	164.4	158.5	167.5	168.8	168.2	168.8	168.6	171.9	174.1	175.0
Beverages, alcoholic	123.5	121.1	124.0	124.5	124.8	125.2	125.5	125.8	128.2	126.0

1/ Beef, veal, lamb, pork, & processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ann Duncan (202) 788-3313.

Table 7.—Producer Price Indexes, U.S. Average (Not Seasonally Adjusted)

	Annual			1989					1990	
	1987	1988	1989 P	Feb	Sept	Oct R	Nov	Dec	Jan	Feb
	1982 = 100									
Finished goods 1/	105.4	108.0	113.5	111.7	113.6	114.9	114.8	115.3	117.5	117.4
Consumer foods	109.5	112.6	114.7	117.2	118.5	119.5	120.2	120.9	123.6	124.4
Fresh fruit	112.0	113.5	111.9	113.2	110.1	121.1	110.8	107.4	103.1	112.0
Fresh & dried vegetables	103.7	105.5	116.9	133.3	96.1	110.0	98.9	104.9	158.6	188.7
Dried fruit	95.0	99.1	103.0	101.0	102.4	103.7	103.6	106.2	106.9	106.9
Canned fruit & juice	115.3	120.2	122.6	121.9	123.2	122.9	122.6	123.4	123.9	126.8
Frozen fruit & juice	113.3	129.8	124.6	122.1	125.4	124.0	121.4	119.9	128.6	147.0
Fresh veg. excl. potatoes	99.0	100.4	104.2	119.9	81.5	101.0	84.1	88.0	159.9	199.2
Canned veg. & juices	103.5	106.3	118.6	116.4	118.9	117.7	117.7	118.5	118.5	117.9
Frozen vegetables	107.3	108.6	115.5	114.5	118.2	115.5	116.4	117.0	117.9	117.8
Potatoes	120.1	113.9	153.6	178.3	140.2	140.2	146.7	160.2	162.0	161.2
Eggs	87.6	88.6	119.6	98.7	124.6	124.3	134.5	141.3	154.8	114.0
Bakery products	118.4	128.4	135.4	133.1	137.7	137.3	137.2	137.8	138.7	139.9
Meats	100.4	99.9	104.8	102.8	105.3	104.8	107.1	106.4	110.6	111.1
Beef & veal	95.5	101.4	109.0	108.1	107.4	105.0	106.9	111.0	113.1	113.7
Pork	104.9	95.0	97.5	93.6	99.9	102.3	103.6	104.6	107.2	107.8
Processed poultry	103.4	111.6	120.8	116.3	119.7	112.7	112.3	110.2	107.9	111.2
Fish	140.0	148.7	144.6	152.7	133.9	140.5	146.5	143.2	158.2	158.4
Dairy products	101.6	102.2	110.6	106.5	113.3	118.4	120.4	121.4	120.9	117.1
Processed fruits & vegetables	106.6	113.8	120.0	118.6	120.7	120.0	120.0	120.8	122.5	125.7
Shortening & cooking oil	103.9	118.8	116.6	115.4	115.5	114.8	117.5	115.8	116.6	118.9
Consumer finished goods less foods	100.7	103.1	108.9	106.6	109.1	110.3	109.8	110.4	113.2	112.4
Beverages, alcoholic	110.3	111.6	115.2	113.9	114.4	114.5	114.7	114.5	115.0	116.4
Soft drinks	111.8	114.3	117.2	116.6	116.5	119.0	118.2	118.0	119.6	121.3
Apparel	108.3	111.7	114.5	114.1	115.0	115.2	115.4	115.5	116.5	117.2
Footwear	109.3	115.1	120.8	119.5	122.3	122.5	122.4	123.3	123.7	124.7
Tobacco products	154.6	171.9	194.9	187.3	198.1	200.4	200.4	209.2	209.6	214.1
Intermediate materials 2/	101.5	107.1	112.0	111.0	112.4	112.3	112.2	112.0	113.4	112.5
Materials for food manufacturing	100.8	106.0	112.7	110.1	113.7	113.1	115.4	115.4	115.6	114.9
Flour	92.9	105.7	114.6	114.1	113.7	112.6	112.7	113.8	113.2	112.9
Refined sugar 3/	106.4	108.9	118.3	115.8	120.4	119.2	119.8	121.5	122.3	121.9
Crude vegetable oils	84.2	116.6	103.4	103.7	85.1	94.1	102.4	97.6	100.2	102.6
Crude materials 4/	93.7	98.0	103.0	101.2	102.3	102.1	102.3	104.0	106.7	106.9
Foodstuffs & feedstuffs	96.2	106.1	111.1	111.0	108.9	107.9	109.4	112.3	113.6	114.4
Fruits & vegetables 5/	106.8	108.5	114.1	123.8	101.8	114.3	103.6	105.5	133.5	154.2
Grains	71.1	97.9	106.4	111.3	100.1	98.2	101.1	101.0	100.8	100.4
Livestock	102.0	103.3	106.0	104.6	103.7	104.6	105.1	110.0	110.2	112.7
Poultry, live	101.2	121.5	128.8	121.5	134.9	109.0	111.8	104.3	108.9	115.5
Fibers, plant & animal	106.4	98.4	107.8	94.8	113.9	116.9	115.3	106.3	104.8	106.7
Fluid milk	91.6	89.4	98.1	94.7	103.1	107.6	110.5	115.6	117.0	108.8
Oilseeds	99.2	134.0	123.8	133.2	113.8	101.7	108.1	106.7	108.1	104.6
Tobacco, leaf	85.7	87.2	93.9	93.1	96.3	95.0	93.7	93.7	93.7	93.7
Sugar, raw cane	110.2	111.9	115.5	111.8	118.8	118.0	118.2	117.2	119.3	117.6
All commodities	102.8	106.9	112.2	110.8	112.4	112.8	112.7	113.0	114.9	114.4
Industrial commodities	102.5	106.3	111.6	110.1	111.9	112.4	112.2	112.3	114.2	113.6
All foods 6/	107.8	111.5	117.8	116.2	117.5	118.3	119.3	120.0	122.7	123.3
Farm products & processed foods & feeds	103.7	110.0	115.3	114.6	114.5	114.5	115.4	116.5	118.2	116.5
Farm products	95.5	104.9	110.7	110.6	108.0	107.8	108.5	111.1	114.5	115.7
Processed foods & feeds 6/	107.9	112.7	117.8	116.6	117.9	117.9	119.0	119.3	120.2	120.0
Cereal & bakery products	112.6	123.0	131.1	129.0	132.8	132.4	132.4	132.9	133.0	133.7
Sugar & confectionery	112.6	114.7	120.1	118.3	121.6	120.1	120.5	120.9	120.9	121.2
Beverages	112.5	114.3	118.3	117.7	117.1	118.1	117.7	117.7	118.6	118.7

1/ Commodities ready for sale to ultimate consumer. 2/ Commodities requiring further processing to become finished goods. 3/ All types & sizes of refined sugar. 4/ Products entering market for the first time that have not been manufactured at that point. 5/ Fresh & dried. 6/ Includes all raw, intermediate, & processed foods (excludes soft drinks, alcoholic beverages, & manufactured animal feeds). P = preliminary. R = revised.

Information contact: Ann Duncan (202) 786-3313.

## Farm-Retail Price Spreads

Table 8.—Farm-Retail Price Spreads

	Annual			1989				1990		
	1987	1988	1989 P	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Market basket 1/										
Retail cost (1982-84=100)	111.6	118.5	124.6	122.3	125.5	125.9	128.8	127.4	132.2	133.1
Farm value (1982-84=100)	97.1	100.5	107.3	105.7	108.2	105.8	108.8	110.5	118.0	118.5
Farm-retail spread (1982-84=100)	119.4	125.1	134.0	131.2	135.9	136.0	136.1	136.5	139.8	140.9
Farm value—retail cost (%)	30.5	30.2	30.1	30.3	29.6	29.4	30.1	30.4	31.3	31.2
Meat products										
Retail cost (1982-84=100)	109.6	112.2	118.7	114.3	117.7	118.1	119.3	120.0	122.3	123.5
Farm value (1982-84=100)	101.2	99.5	103.3	102.6	101.5	100.9	104.0	106.9	111.2	111.6
Farm-retail spread (1982-84=100)	118.3	125.2	130.4	128.3	134.3	135.8	135.0	133.4	133.7	135.7
Farm value—retail cost (%)	46.7	44.9	44.8	45.5	43.7	43.2	44.1	45.1	48.1	45.8
Dairy products										
Retail cost (1982-84=100)	105.9	108.4	115.6	113.4	116.1	118.2	120.2	122.9	125.8	126.0
Farm value (1982-84=100)	93.3	90.8	99.1	97.7	101.0	104.8	110.0	113.6	115.2	113.4
Farm-retail spread (1982-84=100)	117.5	124.7	130.9	127.9	130.1	130.5	129.6	131.4	135.6	139.4
Farm value—retail cost (%)	42.3	40.1	41.1	41.3	41.7	42.6	43.9	44.4	43.9	42.0
Poultry										
Retail cost (1982-84=100)	112.6	120.7	132.7	128.4	134.0	131.2	128.8	127.8	128.6	130.5
Farm value (1982-84=100)	93.8	110.2	118.2	113.9	118.6	101.6	100.6	96.7	100.8	107.1
Farm-retail spread (1982-84=100)	134.2	132.8	149.3	145.1	151.7	165.3	157.0	163.6	160.9	157.4
Farm value—retail cost (%)	44.6	48.9	47.7	47.5	47.4	41.4	42.4	40.5	41.9	43.9
Eggs										
Retail cost (1982-84=100)	91.5	93.6	118.5	106.1	124.6	122.9	129.4	134.9	143.9	124.7
Farm value (1982-84=100)	78.8	78.7	107.7	92.3	110.7	110.3	125.1	133.4	135.4	108.4
Farm-retail spread (1982-84=100)	117.9	123.9	137.7	130.9	148.6	145.5	137.1	137.6	159.1	153.9
Farm value—retail cost (%)	53.9	52.7	58.4	55.9	57.1	57.7	62.1	63.5	60.5	55.9
Cereal & bakery products										
Retail cost (1982-84=100)	114.8	122.1	132.4	128.9	134.6	135.0	135.3	136.1	136.8	137.4
Farm value (1982-84=100)	71.0	92.7	101.7	101.2	99.9	98.7	99.4	101.2	101.1	99.0
Farm-retail spread (1982-84=100)	120.9	128.2	136.7	132.8	139.4	140.1	140.3	141.0	141.9	142.8
Farm value—retail cost (%)	7.8	9.3	9.4	9.8	9.1	9.0	9.0	9.1	9.0	8.8
Fresh fruits										
Retail cost (1982-84=100)	135.6	145.4	154.7	154.3	158.8	159.8	155.3	158.6	177.3	172.5
Farm value (1982-84=100)	113.9	116.5	108.9	104.6	126.6	131.6	135.8	109.2	124.5	131.0
Farm-retail spread (1982-84=100)	145.7	158.7	175.8	177.2	173.8	172.8	184.4	181.4	201.7	191.3
Farm value—retail cost (%)	28.5	25.3	22.2	21.4	25.2	26.0	27.8	21.7	22.2	24.1
Fresh vegetables										
Retail costs (1982-84=100)	121.6	129.3	143.1	144.4	133.9	134.8	141.9	136.5	178.0	186.3
Farm value (1982-84=100)	112.0	105.8	124.0	127.5	98.1	102.7	102.0	118.0	197.4	202.9
Farm-retail spread (1982-84=100)	126.5	141.3	152.9	153.1	152.3	151.3	182.4	148.0	186.4	177.8
Farm value—retail cost (%)	31.3	27.8	29.4	30.0	24.9	25.9	24.4	29.4	37.9	37.0
Processed fruits & vegetables										
Retail cost (1982-84=100)	109.0	117.6	125.0	123.7	128.4	125.9	125.0	124.9	125.1	129.4
Farm value (1982-84=100)	111.1	136.8	134.6	135.2	136.7	136.8	135.8	130.5	136.5	144.7
Farm-retail spread (1982-84=100)	108.3	111.7	122.0	120.1	123.2	122.5	121.8	123.1	121.6	124.8
Farm value—retail costs (%)	24.2	27.6	25.6	26.0	25.7	25.8	25.8	24.8	25.9	28.6
Fats & oils										
Retail cost (1982-84=100)	108.1	113.1	121.2	120.5	121.3	121.6	121.0	121.6	123.5	123.4
Farm value (1982-84=100)	74.1	103.0	95.7	99.2	88.0	88.8	95.3	93.0	93.0	96.7
Farm-retail spread (1982-84=100)	120.9	118.8	130.5	128.3	133.8	134.4	130.5	132.1	134.7	133.2
Farm value—retail cost (%)	18.6	24.5	21.2	22.2	19.5	19.2	21.2	20.6	20.3	21.1
	Annual			1989				1990		
	1987	1988	1989 P	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Beef, Choice										
Retail price 2/ (cts./lb.)	242.5	254.7	289.9	265.2	270.9	270.8	272.9	274.4	281.3	281.5
Net carcass value 3/ (cts.)	145.3	153.9	160.8	160.9	152.3	153.8	159.8	165.9	168.7	167.9
Net farm value 4/ (cts.)	137.9	147.4	155.4	157.6	144.2	148.3	154.8	160.4	163.3	164.2
Farm-retail spread (cts.)	104.6	107.3	114.5	107.8	126.7	122.5	118.1	114.0	118.0	117.3
Carcass—retail 5/ (cts.)	97.2	100.8	109.3	104.3	118.8	117.0	113.3	108.5	112.6	113.6
Farm—carcass 6/ (cts.)	7.4	8.5	5.2	3.3	8.1	5.5	4.8	5.5	5.4	3.7
Farm value—retail price (%)	57	58	58	59	53	55	57	58	58	58
Pork										
Retail price 2/ (cts./lb.)	188.4	183.4	182.9	179.3	184.4	185.8	189.6	191.2	195.1	198.5
Wholesale value 3/ (cts.)	113.0	101.0	99.2	92.7	100.6	106.1	106.9	112.3	104.8	105.6
Net farm value 4/ (cts.)	82.7	69.4	70.4	65.2	70.3	75.6	73.2	79.5	78.8	78.4
Farm-retail spread (cts.)	105.7	114.0	112.5	114.1	114.1	110.2	118.4	111.7	118.5	118.1
Wholesale—retail 5/ (cts.)	75.4	82.4	83.7	86.8	83.8	79.7	82.7	78.9	90.3	90.9
Farm—wholesale 6/ (cts.)	30.3	31.6	28.8	27.5	30.3	30.5	33.7	32.8	28.2	27.2
Farm value—retail price (%)	44	38	38	36	38	41	39	42	39	40

1/ Retail costs are based on CPI-U of retail prices for domestically produced farm foods, published monthly by BLS. The farm value is the payment for the quantity of farm equivalent to the retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale & may include marketing charges such as grading & packing for some commodities. The farm-retail spread, the difference between the retail price & the farm value, represents charges for assembling, processing, transporting, distributing. 2/ Weighted average price of retail cuts from pork & choice yield grade 3 beef carcasses. Prices for BLS. 3/ Value of carcass quantity (beef) & wholesale cuts (pork) equivalent to 1 lb. of retail cuts; beef adjusted for value of fat & bone byproducts. 4/ Market value to producer for live animal equivalent to 1 lb. of retail cuts, minus value of byproducts. 5/ Charges for retailing & other marketing services such as fabricating, wholesaling, in-city transportation. 6/ Charges for livestock marketing, processing, & transportation.

Information contacts: Denis Dunham (202) 786-1870, Ron Gustafson (202) 786-1288

Table 9.—Price Indexes of Food Marketing Costs

(See the March 1990 Issue.)

Information contact: Denis Dunham (202) 786-1870.

## Livestock & Products

Table 10.—U.S. Meat Supply & Use

	Beg. stocks	Produc- tion 1/	Imports	Total supply	Exports	Ending stocks	Consumption		Primary market price 3/
							Total	Per capita 2/	
Million pounds 4/									
Beef							Pounds		
1987	412	23,566	2,269	25,247	604	388	25,257	73.4	64.00
1988	386	23,589	2,379	26,354	680	422	25,252	72.3	60.54
1989	422	23,087	2,175	25,684	1,062	335	24,287	68.9	72.52
1990 F	335	23,306	2,140	25,783	1,200	310	24,273	68.2	71-77
Pork							Pounds		
1987	248	14,374	1,195	15,817	109	347	15,382	59.1	51.00
1988	347	15,684	1,137	17,168	195	414	16,559	63.5	43.39
1989	414	15,813	896	17,123	268	285	16,570	63.2	44.03
1990 F	285	15,524	940	16,749	275	375	16,099	60.8	48-54
Veal 5/							Pounds		
1987	7	429	24	460	7	4	449	1.5	78.05
1988	4	398	27	427	10	5	412	1.4	89.85
1989	5	355	0	360	0	4	356	1.2	91.84
1990 F	4	327	0	331	0	4	327	1.1	90-96
Lamb & mutton							Pounds		
1987	13	315	44	372	1	8	363	1.3	78.09
1988	6	335	51	394	1	6	387	1.4	68.26
1989	6	347	63	416	2	8	406	1.5	67.32
1990 F	8	359	63	430	1	7	422	1.5	61-68
Total red meat							Pounds		
1987	679	38,684	3,532	42,895	721	745	41,430	135.9	—
1988	745	40,004	3,594	44,343	888	847	42,810	138.6	—
1989	847	39,602	3,134	43,583	1,332	632	41,619	134.7	—
1990 F	632	39,518	3,143	43,293	1,478	666	41,121	131.7	—
Broilers							Pounds		
1987	24	15,564	0	15,618	752	25	14,842	80.8	47.4
1988	25	16,180	0	16,205	785	36	15,404	82.5	56.3
1989	38	17,392	0	17,428	859	38	16,531	66.5	59.0
1990 F	38	18,850	0	18,888	940	30	17,718	70.6	51-57
Mature chicken							Pounds		
1987	163	639	0	802	15	188	598	2.5	—
1988	188	638	0	828	26	157	644	2.6	—
1989	157	625	0	782	24	189	568	2.3	—
1990 F	189	632	0	821	22	150	649	2.6	—
Turkeys							Pounds		
1987	178	3,832	0	4,010	33	266	3,711	15.2	57.8
1988	288	3,968	0	4,234	51	250	3,934	16.0	61.5
1989	250	4,229	0	4,479	40	236	4,203	16.9	66.7
1990 F	236	4,466	0	4,702	48	250	4,404	17.6	58-62
Total poultry							Pounds		
1987	365	20,065	0	20,430	800	479	19,151	78.5	—
1988	479	20,786	0	21,265	842	442	19,981	81.1	—
1989	442	22,247	0	22,689	924	463	21,302	85.7	—
1990 F	463	23,747	0	24,210	1,010	430	22,770	90.8	—
Red meat & poultry							Pounds		
1987	1,044	58,749	3,532	63,326	1,521	1,224	60,561	214.4	—
1988	1,224	60,790	3,594	65,608	1,728	1,289	62,591	219.7	—
1989	1,289	61,849	3,134	65,272	2,256	1,095	62,921	220.3	—
1990 F	1,095	63,265	3,143	67,503	2,488	1,126	63,891	222.4	—

1/ Total including farm production for red meats & federally inspected plus nonfederally inspected for poultry. 2/ Retail weight basis. (The beef carcass-to-retail conversion factor was .71 for 1987, & .70.5 for 1988-90.) 3/ Dollars per cwt for red meat; cents per pound for poultry. Beef: Choice steers, Omaha 1,000-1,100 lb.; pork: barrows and gilts, 7 markets; veal: farm price of calves; lamb & mutton: Choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 4/ Carcass weight for red meats & certified ready-to-cook for poultry. 5/ Beginning 1989 veal trade no longer reported separately. F = forecast. — = not available.

Information contact: Polly Cochran, or Maxine Davis (202) 786-1284.

Table 11.—U.S. Egg Supply & Use<sup>1</sup>

	Beg. stocks	Pro- duc- tion	Im- ports	Total supply	Ex- ports	Hatch- ing use	Ending stocks	Consumption		
								Million dozen		
								Total	Per capita	Wholesale price*
1985	11.1	5,710.1	12.7	5,733.9	70.8	548.1	10.7	5,104.5	255.9	88.4
1986	10.7	5,766.3	13.7	5,790.7	101.8	568.8	10.4	5,111.9	253.8	71.1
1987	10.4	5,868.2	5.8	5,884.2	111.2	599.1	14.4	5,159.5	253.8	81.6
1988	14.4	5,783.5	5.3	5,803.2	141.8	605.9	15.2	5,040.3	245.5	82.1
1988 P	15.2	5,588.8	25.2	5,827.1	91.8	641.8	10.7	4,883.3	235.8	81.9
1990 F	10.7	5,655.0	10.0	5,875.7	100.0	675.0	10.0	4,890.7	234.0	73-77

\* Cartoned grade A large eggs, New York. P = preliminary. F = forecast.

Information contact: Maxine Davis (202) 786-1714.

Table 12.—U.S. Milk Supply & Use<sup>1</sup>

	Pro- duc- tion	Commercial			Total commer- cial supply	CCC net re- moves	Commercial			All milk price 2/
		Farm use	Farm market- ings	Beg. stock	Im- porte		Ending stocks	Disap- pear- ance		
		Billion pounds								
1982	135.5	2.4	133.1	5.4	2.5	141.0	14.3	4.8	122.1	13.81
1983	139.6	2.4	137.2	4.8	2.8	144.4	18.8	5.2	122.4	13.58
1984	135.4	2.9	132.4	5.2	2.7	140.4	8.8	4.9	128.8	13.46
1985	143.0	2.5	140.8	4.9	2.8	148.3	13.2	4.8	130.5	12.75
1986	143.1	2.4	140.7	4.8	2.7	148.1	10.8	4.2	133.3	12.51
1987	142.7	2.3	140.5	4.2	2.5	147.1	8.7	4.8	135.8	12.54
1988	145.2	2.2	142.9	4.8	2.4	150.0	8.9	4.3	136.8	12.24
1989	144.3	2.2	142.0	4.3	2.5	148.8	9.0	4.1	135.8	13.54
1990 F	148.0	2.2	144.7	4.1	2.4	151.2	8.1	4.8	138.5	12.36

1/ Milkfat basis. Totals may not add because of rounding. 2/ Delivered to plants & dealers; does not reflect deductions. F = forecast.

Information contact: Jim Miller (202) 786-1770.

Table 13.—Poultry &amp; Eggs

	Annual			1989				1990		
	1987	1988	1989	Feb.	Sept	Oct	Nov	Dec	Jan	Feb
<b>Broilers</b>										
Federally inspected slaughter, certified (mil. lb.)	15,502.5	16,124.4	17,334	1,270.1	1,425.3	1,497.1	1,432.2	1,491.1	1,522.1	1,399.1
Wholesale price, 12-city (cts./lb.)	47.4	56.3	59.0	58.0	59.9	51.7	49.2	48.4	51.7	57.4
Price of grower feed (\$/ton)	186	220	235	243	239	223	221	220	224	223
Broiler-feed price ratio 1/	3.7	3.1	3.1	2.9	3.1	2.7	2.7	2.8	2.7	3.0
Stocks beginning of period (mil. lb.)	23.9	24.8	35.9	32.8	39.7	35.9	34.5	40.8	38.3	28.2
Broiler-type chicks hatched (mil.) 2/	5,379.2	5,602.4	5,944.3	443.9	485.1	484.4	469.8	522.1	518.3	472.0
<b>Turkeys</b>										
Federally Inspected slaughter, certified (mil. lb.)	3,717	3,923	4,174	248.1	385.7	422.1	423.1	334.0	318.9	309.0
Wholesale price, Eastern U.S., 8-16 lb. young hens (cts./lb.)	57.8	61.2	68.7	62.2	57.9	57.8	72.6	72.7	55.8	55.2
Price of turkey grower feed (\$/ton)	213	243	252	264	249	243	241	240	239	241
Turkey-feed price ratio 1/	3.9	3.0	3.2	2.9	3.0	3.2	3.4	3.3	3.0	2.8
Stocks beginning of period (mil. lb.)	178.2	268.2	249.7	262.5	574.3	569.3	571.8	258.0	235.8	267.1
Poults placed in U.S. (mil.)	264.2	261.4	289.0	23.8	19.9	20.2	20.7	21.5	24.7	24.9
<b>Eggs</b>										
Farm production (mil.)	70,418	69,402	67,041	5,163	6,439	5,648	5,556	5,772	5,895	5,155
Average number of layers (mil.)	284	277	269	271	287	288	270	271	271	272
Rate of lay (eggs per layer on farms)										
Cartoned price, New York, grade A large (cts./doz.) 3/	61.8	62.1	81.9	71.1	83.8	84.8	93.4	99.8	92.4	78.8
Price of laying feed (\$/ton)	170	202	209	214	209	200	199	200	199	198
Egg-feed price ratio 1/	6.3	5.3	6.7	5.8	6.8	7.1	7.9	6.3	8.4	7.1
Stocks, first of month										
Shell (mil. doz.)	0.68	1.29	0.27	0.38	0.51	0.69	0.18	0.33	0.38	0.68
Frozen (mil. doz.)	9.8	13.1	14.9	14.9	11.4	10.9	11.3	10.2	10.3	10.8
Replacement chicks hatched (mil.)	428	368	384	27.4	32.9	33.3	29.7	29.3	32.0	32.2

1/ Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. 2/ Placement of broiler chicks is currently reported for 15 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. 3/ Price of cartoned eggs to volume buyers for delivery to retailers.

Information contact: Maxine Davis (202) 786-1714.

Table 14.—Dairy

	Annual			1989				1990		
	1987	1988	1989	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/	11.23	11.03	12.37	11.28	13.10	13.87	14.69	14.93	13.94	12.21
Wholesale price <sup>a</sup>										
Butter, grade A Ch. (cts./lb.)	140.2	132.5	127.0	131.0	125.1	120.5	120.5	120.0	110.8	108.3
Am. cheese, Wis. assembly pt. (cts./lb.)	123.2	123.8	138.8	117.6	155.8	160.3	163.6	182.2	152.3	131.6
Nonfat dry milk (cts./lb.) 2/	79.3	80.2	105.5	83.6	121.7	139.9	158.7	128.0	88.2	82.3
USDA net removals										
Total milk equiv. (mil. lb.) 3/	6,706.0	8,866.2	8,967.9	1,471.6	162.9	168.4	163.7	483.4	1,490.9	1,244.9
Butter (mil. lb.)	187.3	312.6	413.4	67.0	7.7	7.4	7.7	22.1	71.8	59.9
Am. cheese (mil. lb.)	282.0	238.1	37.4	8.5	0	0	0	0	0	0
Nonfat dry milk (mil. lb.)	559.4	267.5	0	0	0	0	0	0	2.9	-0.7
Milk										
Milk prod. 21 States (mil. lb.)	121,431	123,518	122,531	9,699	9,668	9,878	9,654	10,047	10,470	9,810
Milk per cow (lb.)	13,969	14,291	14,370	1,133	1,137	1,161	1,132	1,176	1,227	1,160
Number of milk cows (1,000)	8,693	8,643	8,527	8,564	8,501	8,510	8,531	8,544	8,537	8,529
U.S. milk production (mil. lb.)	142,709	145,152	144,252	6/ 11,411	6/ 11,368	6/ 11,861	6/ 11,396	6/ 11,860	6/ 12,320	6/ 11,542
Stock, beginning										
Total (mil. lb.)	12,867	7,440	8,189	8,949	13,334	12,138	11,136	9,806	8,795	9,294
Commercial (mil. lb.)	4,185	4,846	4,289	4,770	6,830	5,258	4,893	4,198	4,131	4,509
Government (mil. lb.)	8,702	2,794	3,900	4,170	7,505	6,881	6,243	5,410	4,864	4,785
Imports, total (mil. lb.) 3/	2,490	2,394	2,538	169	226	240	266	286	199	—
Commercial disappearance (mil. lb.)	135,753	138,812	135,751	9,592	11,820	11,019	12,014	11,559	10,470	—
Butter										
Production (mil. lb.)	1,104.1	1,207.5	1,260.3	124.7	82.1	92.7	93.8	107.7	127.1	115.7
Stocks, beginning (mil. lb.)	193.0	143.2	214.7	246.6	439.7	407.9	370.6	294.1	256.2	262.0
Commercial disappearance (mil. lb.)	902.5	909.8	840.0	47.8	78.9	84.9	115.7	87.8	57.4	—
American cheese										
Production (mil. lb.)	2,716.7	2,756.6	2,676.2	208.7	200.3	206.8	210.2	228.7	231.7	239.8
Stocks, beginning (mil. lb.)	697.1	370.4	293.0	280.7	308.2	276.8	253.8	238.0	236.2	262.1
Commercial disappearance (mil. lb.)	2,437.1	2,570.0	2,685.2	189.0	232.1	229.0	227.2	229.8	207.2	—
Other cheese										
Production (mil. lb.)	2,627.7	2,815.0	2,903.6	210.8	246.8	246.3	244.0	254.0	252.1	232.1
Stocks, beginning (mil. lb.)	92.0	89.7	104.7	111.4	117.5	98.8	81.3	95.4	93.2	99.3
Commercial disappearance (mil. lb.)	2,880.2	3,034.1	3,171.1	225.2	291.3	291.1	259.5	288.5	259.9	—
Nonfat dry milk										
Production (mil. lb.)	1,056.8	978.5	871.2	85.8	48.3	48.0	50.8	62.5	61.4	71.2
Stocks, beginning (mil. lb.)	686.8	177.2	53.1	66.3	56.9	44.6	36.2	32.5	49.5	49.4
Commercial disappearance (mil. lb.)	492.9	733.1	869.6	86.5	59.1	56.7	54.8	46.4	58.7	—
Frozen dessert										
Production (mil. gal.) 4/	1,260.7	1,246.9	1,231.2	86.6	101.2	90.3	85.5	79.2	79.5	85.4
	Annual			1988				1989		
	1987	1988	1989	II	III	IV	I	II	III	IV P
Milk production (mil. lb.)	142,709	145,152	144,252	37,840	35,920	35,282	36,445	37,702	35,188	34,917
Milk per cow (lb.)	13,819	14,145	14,244	3,683	3,506	3,447	3,586	3,727	3,484	3,448
No. of milk cows (1,000)	10,327	10,262	10,127	10,274	10,245	10,229	10,164	10,116	10,101	10,127
Milk-feed price ratio 5/	1.84	1.58	1.64	1.51	1.46	1.59	1.56	1.48	1.63	1.91
Returns over concentrate 5/	9.52	9.05	10.08	8.33	8.53	9.86	9.83	8.80	9.80	12.10
costs (\$/cwt milk)										

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area. 3/ Milk equivalent, fat basis. 4/ Ice cream, ice milk, & hard sherbet. 5/ Based on average milk price after adjustment for price support deductions. 6/ Estimated. P = preliminary. — = not available.

Information contact: Jim Miller (202) 786-1770.

Table 15.—Wool

	Annual			1988				1990		
	1987	1988	1989 P	Mar	Oct	Nov	Dec	Jan	Feb	Mar
U.S. wool price, (cts./lb.) 1/	265	438	370	410	350	333	300	294	287	267
Imported wool price, (cts./lb.) 2/	247	372	354	387	335	335	338	334	325	321
U.S. mill consumption, scoured 3/										
Apparel wool (1,000 lb.)	129,677	117,068	125,554	13,718	9,931	8,017	10,873	—	—	—
Carpet wool (1,000 lb.)	13,092	15,633	15,872	1,559	1,288	963	1,075	—	—	—

1/ Wool price delivered at U.S. mills, clean basis. Graded Territory 64's (20.80-22.04 micron) staple 2-3/4" & up. 2/ Wool price, Charleston, SC warehouse, clean basis, Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents. 3/ Beginning 1990 mill consumption reported only on a quarterly basis. P = preliminary. — = not available.

Information contact: John Lawler (202) 786-1840.

Table 16.—Meat Animals

	Annual			1989					1990		
	1987	1988	1989	Feb	Sept	Oct	Nov	Dec	Jan	Feb	
Cattle on feed (7 States)											
Number on feed (1,000 head) 1/	7,953	8,411	8,045	7,970	8,831	8,958	7,911	8,331	8,378	8,526	
Placed on feed (1,000 head)	21,040	20,854	20,834	1,610	1,953	2,852	2,001	1,552	1,896	1,403	
Marketings (1,000 head)	19,545	19,918	19,422	1,534	1,579	1,628	1,490	1,418	1,634	1,515	
Other disappearance (1,000 head)	1,217	1,202	1,079	115	47	71	91	87	114	95	
Beef steer-corn price ratio,											
Omaha 2/	41.0	31.5	30.3	28.7	30.8	31.1	32.2	32.8	34.2	34.0	
Hog-corn price ratio, Omaha 2/	32.8	19.8	18.4	18.3	19.8	20.8	20.1	21.7	21.8	22.0	
Market prices (\$/cwt)											
Slaughter cattle											
Choice steers, Omaha	84.60	89.54	72.52	72.92	68.44	69.89	72.48	75.21	78.73	78.61	
Utility cows, Omaha	44.83	48.55	47.86	46.92	52.42	49.42	48.80	49.38	49.78	52.79	
Choice vealers, St. Paul 3/	78.92	90.23	248.62	225.06	258.75	244.38	242.90	230.00	248.50	255.00	
Feeder cattle											
Choice, Kansas City, 600-700 lb.	75.38	83.67	86.13	85.56	88.63	88.25	87.38	86.25	85.70	84.88	
Slaughter hogs											
Barrows & gilts, 7-markets	51.69	43.39	44.03	40.91	44.32	47.15	45.77	49.33	47.94	48.51	
Feeder pigs											
S, Mo., 40-50 lb. (per head)	46.69	38.06	33.63	34.18	30.72	37.27	38.33	38.21	41.78	52.80	
Slaughter sheep & lambs											
Lambs, Choice, San Angelo	76.09	68.26	87.32	72.66	63.81	59.63	58.08	61.00	54.80	60.38	
Ewes, Good, San Angelo	38.82	38.88	38.58	53.28	30.31	28.00	35.25	39.42	38.30	38.47	
Feeder lambs											
Choice, San Angelo	102.26	90.89	79.85	84.38	76.08	74.88	74.88	76.00	72.10	74.88	
Wholesale meat prices, Midwest											
Choice steer beef, 600-700 lb.	97.24	103.34	107.78	107.98	102.08	103.13	107.05	111.41	113.30	112.80	
Canner & cutter cow beef	85.26	87.77	94.43	96.93	99.14	98.14	92.82	100.73	99.89	100.95	
Pork loins, 14-18 lb. 4/	106.23	97.49	101.09	90.97	105.25	111.78	91.75	107.28	101.36	107.75	
Pork bellies, 12-14 lb.	83.11	41.25	34.14	31.41	34.23	38.88	49.98	42.23	48.85	42.53	
Hams, skinned, 14-17 lb.	80.98	71.03	86.39	67.11	69.13	80.58	87.00	78.89	68.44	76.50	
All fresh beef retail price 5/	212.64	224.81	238.07	231.92	241.00	241.20	243.69	245.36	247.81	249.14	
Commercial slaughter (1,000 head)*											
Cattle	35,647	35,079	33,917	2,568	2,774	2,964	2,785	2,680	2,851	2,502	
Steers	17,443	17,344	16,536	1,262	1,353	1,373	1,299	1,283	1,380	1,240	
Heifers	10,908	10,754	10,406	807	874	932	815	790	829	769	
Cows	6,610	6,337	6,316	457	489	596	611	559	606	440	
Bulls & stags	689	844	659	42	58	84	80	48	58	47	
Calves	2,815	2,506	2,172	181	179	198	182	172	181	150	
Sheep & lambs	5,199	5,293	5,464	425	457	484	482	470	489	441	
Hogs	81,081	87,795	88,693	6,791	7,680	8,032	8,039	7,236	7,605	6,820	
Commercial production (mil. lb.)											
Beef	23,405	23,424	22,974	1,744	1,913	2,041	1,908	1,827	1,932	1,705	
Veal	416	387	344	28	28	31	28	25	27	24	
Lamb & mutton	309	329	341	27	27	30	31	31	32	29	
Pork	14,312	15,623	15,759	1,205	1,349	1,421	1,446	1,288	1,359	1,215	
	Annual			1988			1989			1990	
	1987	1988	1989	III	IV	I	II	III	IV	I	
Cattle on feed (13 States)											
Number on feed (1,000 head) 1/	9,555	10,114	9,688	9,306	8,851	9,688	9,918	8,880	8,278	9,443	
Placed on feed (1,000 head)	25,074	24,423	24,484	6,031	6,655	6,232	5,212	5,719	7,321	—	
Marketings (1,000 head)	23,126	23,459	22,955	6,261	5,468	5,658	8,040	5,896	5,361	7/ 5,885	
Other disappearance (1,000 head)	1,389	1,390	1,274	225	352	344	410	227	293	—	
Hogs & pigs (10 States) 6/											
Inventory (1,000 head) 1/	39,730	42,675	43,210	44,065	45,000	43,210	41,655	44,020	45,200	42,200	
Breeding (1,000 head) 1/	6,125	5,435	5,335	5,630	5,460	5,335	5,440	5,565	5,335	5,280	
Market (1,000 head) 1/	34,605	37,240	37,875	38,435	39,540	37,875	38,215	38,455	39,885	36,920	
Farrowings (1,000 head)	8,853	9,370	9,203	2,358	2,301	2,109	2,580	2,324	2,190	2,084	
Pig crop (1,000 head)	68,955	72,268	71,807	18,000	17,520	16,441	20,309	18,167	16,890	—	

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live weight. 3/ Per head starting September 1988. 4/ Prior to 1984, 8-14 lb.; 1984 & 1985, 14-17 lb; beginning 1986, 14-18 lb. 5/ New series estimating the composite price of all beef grades & ground beef sold by retail stores. This new series is in addition to, but does not replace, the series for the retail price of Choice beef that appears in table 8. 6/ Quarters are Dec. of preceding year-Feb. (I), Mar.-May (II), June-Aug. (III), & Sept.-Nov. (IV). 7/ Intentions. \*Classes estimated. — = not available.

Information contacts: Polly Cochran (202) 786-1284.

## Crops &amp; Products

Table 17.—Supply & Utilization<sup>1,2</sup>

	Area											Farm price \$/bu.
	Set aside 3/	Planted	Harvested	Yield	Production	Total supply 4/	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	
		Mil. acres	Bu./acre				Mil. bu.				\$/bu.	
<b>Wheat</b>												
1984/85	18.3	79.2	66.9	38.8	2,595	4,003	405	749	1,424	2,578	1,425	3.39
1985/86	18.8	75.6	64.7	37.5	2,425	3,866	279	767	915	1,981	1,905	3.08
1986/87	21.0	72.1	60.7	34.4	2,092	4,018	413	780	1,004	2,197	1,821	2.42
1987/88	23.9	65.8	58.0	37.7	2,107	3,845	280	808	1,598	2,884	1,281	2.57
1988/89*	22.5	65.5	53.2	34.1	1,812	3,098	137	838	1,419	2,394	702	3.72
1989/90*	9.7	76.6	62.1	32.8	2,036	2,758	190	850	1,275	2,317	442	3.70-3.75
<b>Rice</b>												
1984/85	0.79	2.83	2.80	4,854	138.8	187.3	—	6/60.5	82.1	122.6	64.7	8.04
1985/86	1.24	2.51	2.49	5,414	134.9	201.8	—	6/65.8	58.7	124.5	77.3	8.53
1986/87	1.48	2.38	2.36	5,051	133.4	213.3	—	6/77.7	84.2	161.9	61.4	3.75
1987/88	1.57	2.36	2.33	5,555	129.6	184.0	—	6/80.4	72.2	152.6	31.4	7.27
1988/89	1.09	2.93	2.90	5,514	159.9	195.4	—	6/83.2	85.8	188.8	26.7	8.83
1989/90*	1.21	2.73	2.69	5,749	154.5	186.2	—	6/85.2	82.0	167.2	19.0	7.00-7.50
<b>Corn</b>												
1984/85	3.9	80.5	71.9	108.7	7,674	8,884	4,079	1,091	1,865	7,038	1,648	2.63
1985/86	5.4	83.4	75.2	118.0	8,877	10,536	4,095	1,160	1,241	6,496	4,040	2.23
1986/87	14.3	78.7	89.2	119.3	8,250	12,291	4,714	1,192	1,504	7,410	4,882	1.50
1987/88	23.0	85.7	59.2	119.8	7,131	12,016	4,805	1,229	1,723	7,757	4,259	1.94
1988/89*	20.5	67.6	58.3	84.6	4,929	9,191	3,987	1,245	2,028	7,260	1,930	2.54
1989/90*	10.1	72.3	64.8	116.2	7,527	9,460	4,650	1,305	2,275	8,130	1,330	2.30-2.40
<b>Sorghum</b>												
1984/85	0.8	17.3	15.4	56.4	866	1,154	539	18	297	854	300	2.32
1985/86	0.9	18.3	16.8	66.8	1,120	1,420	684	28	178	869	551	1.93
1986/87	3.0	15.3	13.9	67.7	938	1,489	535	12	198	748	743	1.37
1987/88	4.1	11.8	10.5	69.4	731	1,474	555	25	231	811	663	1.70
1988/89*	3.9	10.4	9.0	63.8	577	1,239	468	22	310	800	440	2.27
1989/90*	2.9	11.9	11.2	55.4	618	1,057	525	15	250	790	267	2.05-2.15
<b>Barley</b>												
1984/85	0.5	12.0	11.2	53.4	599	799	304	170	77	551	247	2.29
1985/86	0.7	13.2	11.6	51.0	591	848	333	169	22	523	325	1.98
1986/87	2.1	13.1	12.0	50.8	611	944	298	174	137	608	336	1.61
1987/88	2.9	11.0	9.9	52.4	521	869	254	174	120	548	321	1.81
1988/89*	2.8	9.9	7.6	38.0	290	622	166	180	79	425	196	2.80
1989/90*	2.2	9.2	8.3	48.6	403	610	175	180	90	455	185	2.40-2.45
<b>Oats</b>												
1984/85	0.1	12.4	8.2	58.0	474	689	433	74	1	509	180	1.67
1985/86	0.1	13.3	8.2	63.7	521	728	460	82	2	544	184	1.23
1986/87	0.6	14.7	6.9	56.3	386	803	395	73	3	471	133	1.21
1987/88	0.8	18.0	6.9	54.0	374	552	358	81	1	440	112	1.58
1988/89*	0.3	13.9	5.5	39.3	218	393	194	100	1	294	98	2.61
1989/90*	0.3	12.1	6.9	54.4	374	537	300	110	1	411	127	1.45-1.65
<b>Soybeans</b>												
1984/85	0	67.8	68.1	28.1	1,861	2,037	0	1,030	598	1,721	316	5.84
1985/86	0	63.1	61.6	34.1	2,099	2,415	0	1,053	740	1,879	536	5.05
1986/87	0	60.4	58.3	33.3	1,940	2,476	0	1,179	757	2,040	436	4.78
1987/88	0	58.2	57.2	33.9	1,938	2,374	0	1,174	602	2,072	302	5.88
1988/89*	0	58.9	57.4	27.0	1,549	1,851	0	1,058	527	1,669	182	7.42
1989/90*	0	60.5	59.4	32.4	1,927	2,109	0	1,095	810	1,804	305	5.55-5.65
<b>Soybean oil</b>												
1984/85	—	—	—	—	11,468	12,209	—	9,917	1,660	11,577	632	29.50
1985/86	—	—	—	—	11,617	12,257	—	10,053	1,257	11,310	947	18.00
1986/87	—	—	—	—	12,783	13,745	—	10,833	1,187	12,020	1,725	15.40
1987/88	—	—	—	—	12,974	8/ 14,895	—	10,930	1,873	12,803	2,092	22.65
1988/89*	—	—	—	—	11,737	8/ 13,987	—	10,591	1,661	12,252	1,715	21.10
1989/90*	—	—	—	—	12,270	8/ 14,000	—	11,300	1,500	12,800	1,200	20.0-22.0
<b>Soybean meal</b>												
1984/85	—	—	—	—	24,529	24,784	—	19,480	4,917	24,397	387	125
1985/86	—	—	—	—	24,951	25,338	—	19,090	6,036	25,126	212	155
1986/87	—	—	—	—	27,758	27,970	—	20,387	7,343	27,730	240	163
1987/88	—	—	—	—	28,060	28,300	—	21,293	6,854	28,147	153	222
1988/89*	—	—	—	—	24,943	25,100	—	19,798	5,129	24,927	173	233
1989/90*	—	—	—	—	26,177	28,350	—	21,450	4,650	26,100	250	160-175

See footnotes at end of table.

Table 17.—Supply &amp; Utilization, continued

	Area			Production	Total supply 4/	Feed and residual	Other domestic use	Exports	Total use	Ending Stocks	Farm price 5/							
	Set Aside 3/	Planted	Harvested	Yield														
	Mil. acres		Lb./acre			Mil. bales												
Cotton 10/																		
1984/85	2.5	11.1	10.4	800	13.0	15.8	—	5.5	6.2	11.8	4.1	58.70						
1985/86	3.6	10.7	10.2	830	13.4	17.6	—	6.4	2.0	8.4	9.4	56.50						
1986/87	4.2	10.0	8.5	552	9.7	19.1	—	7.4	0.7	14.1	5.0	52.40						
1987/88	4.0	10.4	10.0	708	14.8	19.8	—	7.6	0.0	14.2	5.8	64.30						
1988/89*	2.2	12.5	11.9	619	15.4	21.2	—	7.8	0.2	13.9	7.1	56.60						
1989/90*	3.5	10.0	9.5	619	12.2	19.3	—	8.2	7.7	15.9	3.5	—						

\*April 11, 1990 Supply and Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, & oats, August 1 for cotton & rice, September 1 for soybeans, corn, & sorghum, October 1 for soymeal & soyoil. 2/ Conversion factors: Hectare (ha.) = 2.471 acres, 1 metric ton = 2204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.8296 bushels of barley, 68.8944 bushels of oats, 22.046 cwt of rice, and 4 50 480-pound bales of cotton. 3/ Includes diversion, PIK, acreage reduction, 50-82, & 0-92 programs. 4/ Includes imports. 5/ Market average prices do not include an allowance for loans outstanding & Government purchases. 6/ Residual included in domestic use. 7/ Average of crude soybean oil, Decatur. 8/ Includes 186 million pounds in imports for 1987/88, 140 million in 1988/89, and 15 million in 1989/90. 9/ Average of 44 percent, Decatur. 10/ Upland & extra long staple. Stocks estimates based on Census Bureau data, resulting in an unaccounted difference between supply & use estimates & changes in ending stocks. — = not available or not applicable.

Information contact: Commodity Economics Division, Crop Branch (202) 786-1840.

Table 18.—Food Grains

	Marketing year 1/				1989				1990	
	1985/86	1986/87	1987/88	1988/89	Feb	Oct	Nov	Dec	Jan	Feb
<b>Wholesale prices</b>										
Wheat, No. 1 HRW, Kansas City (\$/bu.) 2/	3.28	2.72	2.96	— 17	4.37	4.28	4.36	4.39	4.30	4.14
Wheat, DNS, Minneapolis (\$/bu.) 2/	3.25	2.62	2.92	+25	4.37	NQ	NQ	NQ	NQ	NQ
Rice, S. W. La. (\$/cwt) 3/	16.11	10.25	19.25	14.85	14.20	15.55	15.00	14.80	15.60	15.60
<b>Wheat</b>										
Exports (mil. bu.)	915	1,004	1,592	1,424	134	93	76	85	83	—
Mill grnd (mil. bu.)	703	755	753	778	61	72	69	63	63	—
Wheat flour production (mil. cwt)	314	335	338	348	27	32	30	28	28	—
<b>Rice</b>										
Exports (mil. cwt, rough equiv.)	58.7	84.2	72.2	85.6	9.1	8.6	8.2	9.6	7.6	—
<b>Marketing year 1/</b>										
1986/87				1988				1989		1990
	1986/87	1987/88	1988/89	Jun-Aug	Sept-Nov	Dec-Feb	Mar-May	June-Aug	Sept-Nov	Dec-Feb
Wheat Stocks, beginning (mil. bu.)	1,905	1,821	1,261	1,260.8	2,253.6	1,715.9	1,227.7	701.6	1,917.2	1,423.7
<b>Domestic use</b>										
Food (mil. bu.)	712	721	735	183.3	197.3	178.3	176.0	192.7	196.0	179.0
Seed, feed & residual (mil. bu.) 4/	485	365	240	283.2	17.8	-46.9	-13.8	263.5	-25.7	25.2
Exports (mil. bu.)	999	1,598	1,419	361.6	329.0	380.5	388.0	369.9	328.6	280.0

1/ Beginning June 1 for wheat & August 1 for rice. 2/ Ordinary protein. 3/ Long grain, milled basis. 4/ Residual includes feed use. — = not available. NQ = no quote.

Information contact: Ed Allen & Janet Livezey (202) 786-1840.

Table 19.—Cotton

	Marketing year 1/				1989				1990	
	1985/86	1986/87	1987/88	1988/89	Feb	Oct	Nov	Dec	Jan	Feb
U.S. price, SLM, 1-1/16 in. (cts./lb.) 2/	60.0	53.2	63.1	57.7	55.4	60.4	68.3	63.6	62.2	65.0
Northern Europe prices Index (cts./lb.) 3/	48.9	62.0	72.7	66.4	63.0	82.1	82.1	77.3	74.9	76.9
U.S. M 1-3/32 in. (cts./lb.) 4/	64.8	61.8	76.3	69.2	68.1	83.3	82.1	76.3	74.3	77.0
U.S. mill consumpt. (1,000 bales)	6,399	7,452	7,617	7,782	609	763	702	551	724	648
Exports (1,000 bales)	1,969	8,684	8,582	8,148	738	522	520	683	875	—
Stocks, beginning (1,000 bales)	4,102	9,348	5,026	5,771	15,077	6,577	9,248	12,700	12,699	11,634

1/ Beginning August 1. 2/ Average spot market. 3/ Liverpool Outlook (A) index; average of five lowest priced of 11 selected growths. 4/ Memphis territory growths. — = not available.

Information contact: Scott Sanford (202) 786-1840.

**Table 20.—Feed Grains**

	Marketing year 1/				1989				1990		
	1985/86	1986/87	1987/88	1988/89	Feb	Oct	Nov	Dec	Jan	Feb	
<b>Wholesale prices</b>											
Corn, no. 2 yellow, 30 day, Chicago (\$/bu.)	2.35	1.84	2.14	2.68	2.72	2.38	2.37	2.34	2.36	2.41	
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	3.72	2.73	3.40	4.17	4.26	3.91	4.00	3.98	4.00	3.84	
Barley, feed, Duluth (\$/bu.) 2/	1.53	1.44	1.78	2.31	2.33	2.16	2.15	2.23	2.28	2.20	
Barley, malting, Minneapolis (\$/bu.)	2.24	1.89	2.04	4.11	4.19	3.48	3.18	3.19	3.20	3.02	
Exports 3/											
Corn (mil. bu.)	1,241	1,504	1,723	2,036	123	175	294	258	238	155	
Feed grains (mil. metric tons) 4/	38.6	48.3	52.3	61.3	3.8	5.5	8.2	7.3	7.0	4.8	
<b>Marketing year 1/</b>											
<b>Corn</b>	1985/86	1986/87	1987/88	1988/89	1988		1989		1990		
	Stocks, beginning (mil. bu.)	4,848	4,040	4,882	4,259	4,259	7,072	5,204	3,419	1,930	7,079
Domestic use											
Feed (mil. bu.)	4,095	4,714	4,805	3,979	1,334	1,082	849	600	1,497	1,231	
Food, seed, ind. (mil. bu.)	1,160	1,192	1,229	1,245	294	284	337	330	300	300	
Exports (mil. bu.)	1,241	1,504	1,723	2,036	482	506	600	470	582	692	
Total use (mil. bu.)	6,496	7,410	7,757	7,260	2,109	1,869	1,787	1,490	2,379	2,223	

1/ September 1 for corn & sorghum; June 1 for oats & barley. 2/ Beginning March 1987 reporting point changed from Minneapolis to Duluth. 3/ Includes products. 4/ Aggregated data for corn, sorghum, oats, & barley. P = preliminary. — not available.

Information contact: James Cole (202) 788-1840.

**Table 21.—Fats & Oils**

	Marketing year *				1989					1990	
	1985/86	1986/87	1987/88	1988/89	Jan	Sept	Oct	Nov	Dec	Jan	
<b>Soybeans</b>											
Wholesale price, no. 1 yellow, Chicago (\$/bu.)	5.20	5.03	6.67	7.41	7.70	5.80	5.61	5.76	5.74	5.60	
Crushings (mil. bu.)	1,052.8	1,178.8	1,174.5	1,057.7	99.8	74.1	84.8	104.1	105.4	107.2	
Exports (mil. bu.)	740.7	756.9	801.6	530.6	66.5	17.9	74.2	76.7	65.6	77.4	
Stocks, beginning (mil. bu.)	316.0	536.4	436.4	302.5	138.6	23.8	24.5	96.3	108.6	89.7	
<b>Soybean oil</b>											
Wholesale price, crude,											
Decatur (cts./lb.)	18.02	15.36	22.67	21.09	21.1	18.8	19.0	16.7	18.1	19.3	
Production (mil. lb.)	11,617.3	12,783.1	12,974.5	11,737.0	1,105.8	843.0	1,057.3	1,145.7	1,161.2	1,187.4	
Domestic disp. (mil. lb.)	10,045.9	10,820.2	10,734.1	10,455.6	838.0	931.6	1,134.2	1,045.4	975.2	1,038.9	
Exports (mil. lb.)	1,257.3	1,184.5	1,873.2	1,658.2	104.5	265.6	123.9	82.5	113.4	79.3	
Stocks, beginning (mil. lb.)	632.5	946.6	1,725.0	2,092.2	2,539.8	2,069.8	1,715.4	1,514.6	1,532.4	1,604.9	
<b>Soybean meal</b>											
Wholesale price, 44% protein, Decatur (\$/ton)	154.88	162.61	221.90	233.46	248.00	217.10	191.60	183.40	179.4	172.30	
Production (1,000 ton)	24,951.3	27,758.8	28,060.2	24,942.7	2,359.8	1,744.0	2,246.2	2,492.5	2,519.6	2,548.6	
Domestic disp. (1,000 ton)	19,117.2	20,387.4	21,275.9	19,792.5	1,723.2	1,583.5	1,933.5	2,147.4	1,820.6	2,052.4	
Exports (1,000 ton)	8,009.3	7,343.0	6,871.0	5,130.8	548.0	159.7	265.0	371.4	565.1	570.4	
Stocks, beginning (1,000 ton)	386.9	211.7	240.2	163.6	353.6	152.0	172.9	220.5	194.3	328.2	
Margarine, wholesale price, Chicago, white (cts./lb.)	51.2	40.3	40.3	52.3	54.6	52.20	51.7	52.1	52.4	52.6	

\* Beginning September 1 for soybeans; October 1 for soymeal & oil; calendar year for margarine.

Information contacts: Roger Hoskin (202) 788-1840, Tom Bickerton (202) 788-1824.

Table 22.—Farm Programs, Price Supports, Participation &amp; Payment Rates

	Target price	Loan rate	Findley loan rate	Payment rates				Base acres 1/	Program 2/	Participa-tion rate 3/
				Deficiency	Paid land diversion	PIK	Percent 4/			
				\$/bu.			Mil. acres			
<b>Wheat</b>										
1984/85	4.38	3.30	—	1.00	2.70	85	94.0	20/10/10-20	80/60/20	
1985/86	4.38	3.30	—	1.08	2.70	—	94.0	20/10/0	73	
1986/87 5/	4.38	3.00	2.40	1.98	2.00	1.10	91.6	22 5/2.5/5-10	85/85/21	
1987/88	4.38	2.85	2.28	1.81	—	—	87.6	27.6/0/0	88	
1988/89	4.23	2.78	2.21	0.69	—	—	84.8	27.5/0/0	86	
1989/90	4.10	2.58	2.06	7/ .32	—	—	82.3	10/0/0	78	
1990/91	4.00	2.44	1.95	—	—	—	—	* 5/0/0	—	
<b>Rice</b>										
1984/85	11.90	8.00	—	3.78	—	—	4.1	25/0/0	85	
1985/86	11.90	8.00	6/ 3.18	3.90	3.50	—	4.2	20/15/0	90	
1986/87 5/	11.90	7.20	6/ 3.82	4.70	—	—	4.2	35/0/0	94	
1987/88	11.66	6.84	6/ 5.77	4.82	—	—	4.1	35/0/0	98	
1988/89	11.15	6.63	6/ 6.30	4.31	—	—	4.1	25/0/0	94	
1989/90	10.80	6.50	6/ 6.50	3.50	—	—	4.1	25/0/0	95	
1990/91	10.71	6.50	—	—	—	—	—	20/0/0	95	
<b>Corn</b>										
1984/85	3.03	2.55	—	.43	—	—	80.8	10/0/0	54	
1985/86	3.03	2.55	—	0.48	—	—	84.2	10/0/0	69	
1986/87 5/	3.03	2.40	1.92	1.11	—	—	81.7	17.5/2.5/0	83	
1987/88	3.03	2.28	1.82	1.09	2.00	—	81.5	20/15/0	90	
1988/89	2.93	2.21	1.77	7/ .36	1.75	—	82.9	20/10/0: 0/92	87	
1989/90	2.84	2.06	1.65	7/ .64	—	—	82.7	10/0/0: 0/92	61	
1990/91	2.75	1.96	1.57	—	—	—	—	10/0/0: 0/92	—	
<b>Sorghum</b>										
1984/85	2.88	2.42	—	0.46	—	—	18.4	8/ (same)	42	
1985/86	2.88	2.42	—	0.46	—	—	19.3	—	55	
1986/87 5/	2.88	2.28	1.82	1.06	0.65	—	19.0	—	75	
1987/88	2.88	2.17	1.74	1.14	1.90	—	17.4	—	84	
1988/89	2.78	2.10	1.68	0.48	1.65	—	16.8	—	82	
1989/90	2.70	1.96	1.57	7/ .70	—	—	16.2	—	79	
1990/91	2.61	1.86	1.49	—	—	—	—	—	—	
<b>Barley</b>										
1984/85	2.60	2.08	—	0.28	—	—	11.6	8/ (same)	44	
1985/86	2.60	2.08	—	0.52	—	—	13.3	—	57	
1986/87 5/	2.60	1.95	1.58	0.99	0.57	—	12.4	—	72	
1987/88	2.60	1.88	1.49	0.79	1.60	—	12.5	—	84	
1988/89	2.51	1.80	1.44	0.00	1.40	—	12.5	—	79	
1989/90	2.43	1.68	1.34	7/ .23	—	—	12.4	—	69	
1990/91	2.36	1.60	1.28	—	—	—	—	—	—	
<b>Oats</b>										
1984/85	1.60	1.31	—	0	—	—	9.8	8/ (same)	14	
1985/86	1.60	1.31	—	0.29	—	—	9.4	—	14	
1986/87 5/	1.60	1.23	0.98	0.39	0.36	—	9.2	—	37	
1987/88	1.60	1.17	0.94	0.20	0.80	—	8.4	—	45	
1988/89	1.55	1.13	0.90	11/ 0.00	—	—	7.9	5/0/0: 0/92	30	
1989/90	1.50	1.06	0.85	0.00	—	—	7.6	5/0/0: 0/92	23	
1990/91	1.45	1.01	0.81	—	—	—	—	5/0/0: 0/92	—	
<b>Soybeans 9/</b>										
1984/85	—	5.02	—	—	—	—	—	—	—	
1985/86	—	5.02	—	—	—	—	—	—	—	
1986/87 5/	—	4.77	—	—	—	—	—	—	—	
1987/88	—	4.77	—	—	—	—	—	—	—	
1988/89	—	4.77	—	—	—	—	—	—	—	
1989/90	—	4.53	—	—	—	—	—	10/ 10/25	—	
<b>Upland cotton</b>										
1984/85	81.0	55.00	—	18.60	—	—	15.6	25/0/0	70	
1985/86	81.0	57.30	—	23.70	30.00	—	15.9	20/10/0	82/0/0	
1986/87 5/	81.0	55.00	11/ 44.00	28.00	—	—	15.5	25/0/0	93	
1987/88	79.4	52.25	12/ —	17.3	—	—	14.5	25/0/0	93	
1988/89	75.9	51.80	12/ —	19.4	—	—	14.5	12.5/0/0	89	
1989/90	73.4	50.00	12/ —	11.4	—	—	14.6	25/0/0	89	
1990/91	72.9	50.27	12/ —	—	—	—	—	12.5/0/0	—	

1/ Includes planted area plus acres considered planted (ARP, PLD, 0-92 etc). Net of CRP. 2/ Percentage of base acres that farmers participating in Acreage Reduction Programs/Paid Land Diversion/PIK were required to devote to conserving uses to receive program benefits. 3/ Percentage of base acres enrolled in Acreage Reduction Programs/Paid Land Diversion/PIK. 4/ Percent of program yield, except 1986/87 wheat, which is dollars per bushel. 1984 PIK rates apply only to the 10-20 portion. 5/ Rates for payments received in cash were reduced by 4.3 percent in 1986/87 due to Gramm-Rudman-Hollings. 6/ Annual average world market price. 7/ Guaranteed to farmers signed up for 0/92. 8/ The sorghum, oats, & barley programs were the same as for corn in each year except 1988-90, when the corn ARP was lower than for the other feed grains. 9/ There are no target prices, acreage programs, or payment rates for soybeans. 10/ Soybean program data refers to percent of program crop base permitted to shift into beans without loss of base. 11/ Loan repayment rate. 12/ Loans may be repaid at the lower of the loan rate or world market prices. \*On September 13, the Secretary announced that participating farmers have the option of planting up to 105 percent of their wheat base to boost 1990 supplies. For every acre planted in excess of 95 percent of base, the acreage used to compute deficiency payments will be cut by 1 acre. — = not available.

Information contact: James Cole (202) 786-1840.

Table 23.—Fruit

	1981	1982	1983	1984	1985	1986	1987	1988	1989 P
Citrus 1/									
Production (1,000 ton)	15,105	12,139	13,682	10,832	10,525	11,058	11,994	12,761	13,200
Per capita consumpt. (lbs.) 2/	104.4	109.3	120.0	102.8	109.1	117.3	112.8	113.6	—
Noncitrus 3/									
Production (1,000 tons)	13,332	14,659	14,154	14,291	14,189	13,918	16,011	15,872	16,090
Per capita consumpt. (lbs.) 2/	88.0	89.2	88.7	93.9	91.8	96.4	101.5	97.7	—
									1990
F.o.b. shipping point prices	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
Apples (\$/carton) 4/	7.86	9.55	11.31	10.49	8.31	—	9.00	8.83	11.00
Pears (\$/box) 5/	14.38	—	—	—	11.10	—	11.75	12.00	13.85
Grower prices									
Oranges (\$/box) 6/	8.10	5.04	3.91	5.62	6.22	6.47	5.63	4.70	4.93
Grapefruit (\$/box) 6/	4.85	4.62	5.63	6.10	8.1B	5.54	5.18	4.62	4.68
Stocks, ending									
Fresh apples (mil. lbs.)	347.3	174.9	8.0	2,522.0	4,501.9	3,845.8	3,220.8	2,571.7	2,044.5
Fresh pears (mil. lbs.)	6.4	11.0	157.9	446.2	436.9	368.8	272.8	200.2	153.0
Frozen fruits (mil. lbs.)	621.4	722.5	850.3	863.9	955.1	909.3	805.2	727.9	668.3
Frozen orange juice (mil. lbs.)	1,296.9	1,140.0	946.9	808.4	693.1	667.7	749.6	926.6	1,042.3

1/ 1989 indicated 1988/89 season. 2/ Per capita consumption for total U.S. population, including military consumption of both fresh and processed fruit in fresh weight equivalent. 3/ Calendar year. 4/ Red delicious, Washington, extra fancy, carton tray pack, 125's. 5/ D'Anjou, Washington, standard box wrapped, U.S. no. 1, 135's. 6/ U.S. equivalent on-tree returns. P = preliminary. — = not available.

Information contact: Wynnice Napper (202) 786-1885.

Table 24.—Vegetables

	Calendar year									
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
<b>Production</b>										
Total vegetables (1,000 cwt)	395,225	392,343	430,795	403,320	457,394	453,771	461,329	488,470	477,729	543,748
Fresh (1,000 cwt) 1/ 3/	179,416	183,456	193,452	185,861	202,608	204,148	215,969	230,913	237,978	240,421
Processed (tons) 2/ 3/	10,790,440	10,444,330	11,887,170	10,887,950	12,739,280	12,481,240	12,268,020	12,877,850	11,987,560	15,166,340
Mushrooms (1,000 lbs.)	469,576	517,146	490,826	561,531	595,881	587,958	614,393	631,819	667,367	—
Potatoes (1,000 cwt)	303,905	340,623	355,131	333,726	362,039	406,609	381,743	389,320	356,438	370,344
Sweetpotatoes (1,000 cwt)	10,953	12,799	14,833	12,083	12,802	14,573	12,368	11,611	10,845	11,499
Dry edible beans (1,000 cwt)	26,729	32,751	25,563	15,520	21,070	22,175	22,888	28,031	18,253	24,333
<b>Shipments</b>										
May	35,876	31,223	21,599	21,914	15,030	18,805	21,968	17,467	21,552	17,748
Potatoes (1,000 cwt)	15,768	9,991	8,466	10,878	9,005	9,612	12,639	10,389	13,096	10,758
Sweetpotatoes (1,000 cwt)	190	20	19	187	288	333	789	451	301	255

1/ Includes fresh production of asparagus, broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, & tomatoes. 2/ Includes processing production of snap beans, sweet corn, green peas, tomatoes, cucumbers (for pickles), asparagus, broccoli, carrots, & cauliflower. 3/ Asparagus & cucumber estimates were not available for 1982 & 1983. 4/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, lettuce, onions, bell peppers, squash, tomatoes, cantaloupes, honeydews, & watermelons. — = not available.

Information contact: Shannon Hamm or Cathy Greene (202) 786-1884.

Table 25.—Other Commodities

	Annual					1988	1989			
	1985	1986	1987	1988	1989		Oct-Dec	Jan-Mar	Apr-June	July-Sept
<b>Sugar</b>										
Production 1/	5,969	6,257	7,309	7,087	8,827	3,594	1,824	677	617	3,709
Deliveries 1/	8,035	7,786	8,187	8,188	8,309	2,107	1,902	2,056	2,181	2,790
Stocks, ending 1/	3,126	3,225	3,195	3,132	2,933	3,134	3,413	2,351	1,224	2,933
<b>Coffee</b>										
Composite green price N.Y. (cts/lb.)	137.46	185.18	109.14	115.59	95.17	120.75	120.87	118.01	72.29	63.70
Imports, green bean equiv. (mil. lbs.) 2/	2,550	2,596	2,638	2,072	2,630	472	586	635	784	725
<b>Tobacco</b>										
Prices at auctions 3/										
Flue-cured (\$/lb.)	1.52	1.59	1.61	1.55	—	—	—	1.74	1.70	1.58
Burley (\$/lb.)	1.60	1.56	1.61	1.62	—	—	—	—	—	1.67
Domestic consumption 4/										
Cigarettes (bill.)	584.0	575.0	562.5	56.3	51.5	26.8	47.2	44.4	48.2	50.0
Large cigars (mil.)	3,055	2,728	2,531	209.7	255.0	166.1	231.0	216.2	211.4	212.5

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green & processed coffee. 3/ Crop year July-June for flue-cured. Oct.-Sept. for burley. 4/ Taxable removals. — = not available.

Information contact: sugar, Peter Buzzell (202) 786-1809; coffee, Fred Gray (202) 786-1888; tobacco, Verner Grise (202) 786-1890.

## World Agriculture

**Table 26.—World Supply & Utilization of Major Crops, Livestock, & Products**

	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89 P	1989/90 F
Million units							
<b>Wheat</b>							
Area (hectares)	228.9	231.2	229.6	228.2	219.0	218.0	225.9
Production (metric tons)	489.3	511.9	500.1	530.6	501.7	500.0	534.0
Exports (metric tons) 1/	102.0	107.0	95.0	90.7	105.0	87.0	98.3
Consumption (metric tons) 2/	474.0	493.0	496.2	522.5	530.7	531.4	537.0
Ending stocks (metric tons) 3/	145.1	164.0	168.3	178.4	147.5	117.0	114.0
<b>Coarse grains</b>							
Area (hectares)	335.0	334.6	341.3	337.3	323.6	324.5	323.1
Production (metric tons)	688.1	815.8	842.7	833.7	792.1	728.6	797.0
Exports (metric tons) 1/	93.4	100.4	83.2	84.1	83.2	94.5	98.1
Consumption (metric tons) 2/	759.3	782.6	778.4	807.0	813.0	796.7	826.0
Ending stocks (metric tons) 3/	110.7	143.0	208.2	234.0	213.1	145.0	116.4
<b>Rice, milled</b>							
Area (hectares)	144.1	144.1	144.6	145.1	141.4	145.5	145.0
Production (metric tons)	307.9	318.8	318.8	318.3	313.7	330.2	340.0
Exports (metric tons) 4/	12.4	11.4	12.8	12.9	11.0	15.3	13.5
Consumption (metric tons) 2/	304.5	310.0	319.5	322.8	319.7	327.6	334.0
Ending stocks (metric tons) 3/	46.0	54.0	54.0	50.8	44.0	47.4	52.5
<b>Total grains</b>							
Area (hectares)	708.0	709.0	715.5	710.6	684.0	688.0	694.5
Production (metric tons)	1,485.3	1,646.5	1,661.6	1,682.6	1,807.5	1,559.7	1,672.0
Exports (metric tons) 1/	207.8	218.8	180.8	187.7	200.1	206.8	209.0
Consumption (metric tons) 2/	1,537.8	1,586.2	1,594.1	1,653.2	1,663.4	1,655.7	1,699.4
Ending stocks (metric tons) 3/	302.4	362.8	431.4	461.2	405.5	309.4	282.0
<b>Oilseeds</b>							
Crush (metric tons)	135.8	150.7	155.1	161.4	167.7	165.8	172.4
Production (metric tons)	165.0	191.1	196.2	194.4	209.5	202.5	213.3
Exports (metric tons)	33.0	33.1	34.5	37.7	39.5	32.0	35.5
Ending stocks (metric tons)	15.7	21.1	26.8	23.5	23.0	21.6	22.7
<b>Meals</b>							
Production (metric tons)	92.5	101.8	105.0	110.5	115.0	112.1	117.3
Exports (metric tons)	29.7	32.3	34.4	36.7	36.3	38.3	38.7
<b>Oils</b>							
Production (metric tons)	42.1	46.2	48.4	50.3	53.1	53.7	56.3
Exports (metric tons)	13.7	15.6	18.4	18.9	17.7	18.3	19.1
<b>Cotton</b>							
Area (hectares)	31.0	33.0	31.9	29.9	31.1	34.0	32.9
Production (bales)	65.6	88.2	79.6	70.4	81.2	84.5	79.8
Exports (bales)	19.2	20.2	20.2	26.0	23.1	25.6	25.1
Consumption (bales)	68.3	70.0	75.6	82.5	84.1	84.9	85.8
Ending stocks (bales)	24.0	42.4	47.2	35.2	32.5	31.5	25.5
	1984	1985	1986	1987	1988	1989 P	1990 F
<b>Red meat</b>							
Production (metric tons)	99.8	103.7	106.7	109.7	113.3	114.6	114.2
Consumption (metric tons)	97.8	101.6	105.4	107.9	111.5	113.0	112.3
Exports (metric tons) 1/	6.0	6.4	6.7	6.7	6.9	6.9	7.2
<b>Poultry</b>							
Production (metric tons)	25.2	26.2	27.4	29.3	30.2	31.3	32.6
Consumption (metric tons)	25.0	25.8	27.0	28.7	29.8	30.9	32.1
Exports (metric tons) 1/	1.3	1.2	1.3	1.5	1.7	1.7	1.7
<b>Dairy</b>							
Milk production (metric tons)	413.0	413.4	419.0	427.1	429.8	431.3	437.0

1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stocks data are based on differing marketing years & do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1984 data correspond with 1983/84, etc. P = preliminary. F = forecast.

Information contacts: Crops, Frederic Suris (202) 786-1824; red meat & poultry, Linda Bailey (202) 786-1286; dairy, Sara Short (202) 786-1769.

## U.S. Agricultural Trade

Table 27.—Prices of Principal U.S. Agricultural Trade Products

	Annual			1989				1990		
	1987	1988	1989	Feb	Sept	Oct	Nov	Dec	Jan	Feb
<b>Export commodities</b>										
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	3.11	3.97	4.65	4.70	4.47	4.50	4.57	4.62	4.59	4.41
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	1.95	2.73	2.85	3.00	2.62	2.73	2.79	2.79	2.70	2.71
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	1.88	2.52	2.70	2.81	2.63	2.80	2.64	2.65	2.60	2.58
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	5.55	7.81	7.08	7.89	8.13	5.95	8.18	8.22	8.07	8.05
Soybean oil, Decatur (cts./lb.)	15.85	23.52	20.21	21.02	18.59	18.73	19.51	19.10	19.55	20.54
Soybean meal, Decatur (\$/ton)	175.57	234.75	218.59	234.18	218.65	191.93	183.78	178.82	171.68	161.80
Cotton, 8-market avg. spot (cts./lb.)	64.35	57.25	63.78	55.39	68.46	69.70	68.28	63.58	62.21	65.03
Tobacco, avg. price at auction (cts./lb.)	137.41	153.81	151.58	141.68	165.93	162.98	160.89	161.23	160.77	160.54
Rice, f.o.b. mill, Houston (\$/cwt.)	13.15	19.80	15.68	15.00	18.50	18.50	18.00	15.87	15.50	15.89
Inedible tallow, Chicago (cts./lb.)	13.78	18.84	14.86	18.00	14.13	15.25	14.75	14.25	14.87	14.50
<b>Import commodities</b>										
Coffee, N.Y. spot (\$/lb.)	1.09	1.21	1.04	1.31	0.78	0.71	0.72	0.70	0.72	0.78
Rubber, N.Y. spot (cts./lb.)	50.65	59.20	50.65	59.34	48.13	48.09	45.64	44.82	44.72	45.75
Cocoa beans, N.Y. (\$/lb.)	0.87	0.89	0.55	0.88	0.49	0.48	0.44	0.42	0.44	0.45

Information contact: Mary Teymourian (202) 786-1820.

Table 28.—Indexes of Real Trade-Weighted Dollar Exchange Rates<sup>1</sup>

	1989						1990			
	June	July	Aug P	Sept P	Oct P	Nov P	Dec P	Jan P	Feb P	
	1985 = 100									
Total U.S. trade 2/	74.7	72.0	72.8	73.9	71.7	71.0	69.4	67.3	66.7	65.7
Agricultural trade										
U.S. markets	92.1	80.5	80.8	81.3	79.7	79.5	78.4	77.1	78.2	75.4
U.S. competitors	88.7	87.4	85.8	85.3	83.8	82.5	81.2	78.6	78.5	77.9
Wheat										
U.S. markets	93.6	93.2	91.9	91.9	90.7	90.1	88.8	88.3	83.8	82.8
U.S. competitors 3/	88.9	88.2	84.3	83.6	81.8	80.4	79.4	76.0	76.9	76.5
Soybeans										
U.S. markets	74.4	72.2	72.9	73.7	71.8	71.5	70.0	68.9	68.5	67.8
U.S. competitors 3/	106.1	105.1	97.0	92.4	89.5	85.3	85.4	75.3	75.5	75.6
Corn										
U.S. markets	73.8	72.3	74.0	74.7	73.1	73.3	72.6	72.2	71.8	71.5
U.S. competitors 3/	105.3	99.5	94.8	92.5	89.1	88.5	85.3	76.3	75.9	75.2
Cotton										
U.S. markets	77.4	76.3	78.4	77.0	75.0	78.0	75.8	75.3	75.2	75.0
U.S. competitors	84.1	83.2	86.2	84.7	82.0	80.4	79.1	76.2	74.0	72.2

1/ Real indexes adjust nominal exchange rates for differences in rates of inflation, to avoid the distortion caused by high-inflation countries. A higher value means the dollar has appreciated. See the October 1988 issue of Agricultural Outlook for a discussion of the calculations and the weights used. 2/ Federal Reserve Board Index of trade-weighted value of the U.S. dollar against 10 major currencies. Weights are based on relative importance in world financial markets. 3/ Substantial devaluations of the Argentine austral & Brazilian cruzado resulted in a sharp increase in the April, 1989, & subsequent values of these indices. P = preliminary.

Information contact: Tim Baxter, David Stallings (202) 786-1706.

Table 29.—Trade Balance

	Fiscal year 1/								Jan	
	1983	1984	1985	1986	1987	1988	1989 F	1990 F	1990	
	\$ million									
Exports										
Agricultural	34,789	38,027	31,201	28,312	27,876	35,379	39,651	38,000	3,758	
Nonagricultural	159,373	170,014	179,236	178,291	202,911	258,593	302,507	—	25,447	
Total 2/	194,142	208,041	210,437	205,603	230,787	293,872	342,158	—	29,205	
Imports										
Agricultural	16,373	18,916	19,740	20,884	20,850	21,014	21,479	21,000	2,012	
Nonagricultural	230,527	297,736	313,722	342,846	367,374	408,138	441,072	—	38,066	
Total 3/	246,900	316,652	333,462	363,730	388,024	430,152	462,551	—	40,078	
Trade balance										
Agricultural	18,396	19,111	11,461	5,428	7,226	14,365	18,172	17,000	1,746	
Nonagricultural	-71,154	-127,722	-134,486	-163,555	-164,483	-150,545	-138,565	—	-12,619	
Total	-52,758	-108,611	-123,025	-158,127	-157,237	-136,180	-120,393	—	-10,873	

1/ Fiscal years begin October 1 & end September 30. Fiscal year 1989 began Oct. 1, 1988 & ended Sept. 30, 1989. 2/ Domestic exports including Department of Defense shipments (F.A.S. value). 3/ Imports for consumption (customs value). F = forecast. — = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 30.—U.S. Agricultural Exports &amp; Imports

	Fiscal year*			Jan 1990	Fiscal year*			Jan 1990	
	1988	1989	1990 F		1988	1989	1990 F		
	1,000 units				\$ million				
<b>EXPORTS</b>									
Animals, live (no.) 1/	430	758	—	63	452	475	—	35	
Meats & preps., excl. poultry (mt)	631	869	0	70	1,797	2,355	—	188	
Dairy products (mt)	388	504	—	2	536	475	600	18	
Poultry meats (mt)	390	466	500	36	424	514	—	45	
Fats, oils, & greases (mt)	1,362	1,377	3/1,400	96	545	531	—	35	
Hides & skins incl. furskins	—	—	—	—	1,837	1,713	—	157	
Cattle hides, whole (no.) 1/	20,817	26,200	—	2,284	1,458	1,360	—	115	
Mink pelts (no.) 1/	2,455	3,073	—	408	88	91	—	10	
Grains & feeds (mt)	108,944	114,976	—	10,677	12,569	18,837	4/15,000	1,482	
Wheat (mt)	40,517	37,702	33,000	2,132	4,460	6,008	5/5,400	347	
Wheat flour (mt)	1,236	1,268	1,300	96	170	266	—	22	
Rice (mt)	2,173	3,052	2,500	246	731	955	800	82	
Feed grains, incl. products (mt)	53,117	61,094	63,500	7,068	5,193	7,379	8,700	808	
Feeds & fodders (mt)	11,255	11,071	6/11,400	1,056	1,720	1,848	—	179	
Other grain products (mt)	910	1,197	—	110	362	513	—	55	
Fruits, nuts, and preps. (mt)	2,409	2,555	—	219	2,368	2,394	—	184	
Fruit juices incl. froz. (1,000 hectoliters) 1/	5,497	4,997	—	539	252	284	—	30	
Vegetables & preps. (mt)	1,821	2,482	—	201	1,280	1,546	—	181	
Tobacco, unmanufactured (mt)	229	212	200	20	1,297	1,274	1,300	122	
Cotton, excl. linters (mt)	1,388	1,441	1,700	191	2,136	2,039	2,700	321	
Seeds (mt)	286	514	—	72	415	500	500	87	
Sugar, cane or beet (mt)	318	368	—	25	98	134	—	10	
Oilseeds & products (mt)	29,888	21,090	—	2,743	7,758	8,624	5,600	875	
Oilseeds (mt)	21,601	14,775	—	2,114	5,295	4,400	—	496	
Soybeans (mt)	21,142	14,088	15,800	2,078	5,086	4,079	3,400	472	
Protein meal (mt)	6,389	4,816	4,600	523	1,501	1,317	900	116	
Vegetable oils (mt)	1,699	1,498	—	106	962	908	—	84	
Essential oils (mt)	9	13	—	2	120	171	—	19	
Other	610	812	—	507	1,495	1,805	—	169	
Total	148,473	147,589	145,500	14,881	35,379	38,651	38,000	3,758	
<b>IMPORTS</b>									
Animals, live (no.) 1/	2,238	2,484	—	306	729	740	700	93	
Meats & preps., excl. poultry (mt)	1,280	1,092	—	94	2,788	2,433	—	239	
Beef & veal (mt)	779	868	885	65	1,681	1,527	1,000	168	
Pork (mt)	456	371	370	24	1,001	778	800	81	
Dairy products (mt)	232	211	300	17	881	834	800	68	
Poultry & products 1/	—	—	—	—	97	130	—	14	
Fats, oils, & greases (mt)	20	14	—	1	19	14	—	1	
Hides & skins, incl. furskins 1/	—	—	—	—	247	240	—	11	
Wool, unmanufactured (mt)	56	62	—	4	292	319	—	17	
Grains & feeds (mt)	3,075	3,488	3,200	256	888	1,139	1,100	85	
Fruits, nuts, & preps., excl. juices (mt)	4,797	5,036	4,916	501	2,189	2,269	—	237	
Bananas & plantains (mt)	3,030	3,039	3,050	284	820	851	800	83	
Fruit juices (1,000 hectoliters) 1/	28,758	27,778	27,000	3,693	768	793	—	99	
Vegetables & preps. (mt)	2,518	2,953	2,700	319	1,593	1,059	1,900	322	
Tobacco, unmanufactured (mt)	217	169	280	13	811	521	500	41	
Cotton, unmanufactured (mt)	36	13	—	8	9	8	—	2	
Seeds (mt)	143	158	180	20	153	187	200	17	
Nursery stock & cut flowers 1/	—	—	—	—	419	466	—	42	
Sugar, cane or beet (mt)	1,078	1,830	—	98	372	820	—	40	
Oilseeds & products (mt)	1,772	1,917	1,900	193	838	946	900	85	
Oilseeds (mt)	208	424	—	61	71	159	—	24	
Protein meal (mt)	253	359	—	35	42	65	—	8	
Vegetable oils (mt)	1,311	1,133	—	97	725	721	—	55	
Beverages excl. fruit juices (1,000 hectoliters) 1/	15,583	13,987	—	928	2,008	1,815	—	121	
Coffee, tea, cocoa, spices	1,841	1,868	—	211	4,274	3,896	—	307	
Coffee, incl. products (mt)	1,050	1,084	1,200	120	2,600	2,467	2,300	177	
Cocoa beans & products (mt)	582	584	550	72	1,164	989	900	93	
Rubber & allied gums (mt)	848	927	850	72	949	1,051	1,000	59	
Other	—	—	—	—	931	1,087	—	111	
Total	—	—	—	—	21,014	21,479	21,000	2,012	

\*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1989 began Oct. 1, 1988 & ended Sept. 30, 1989. 1/ Not included in total volume. 2/ Forecasts for footnoted items 2/-5/ are based on slightly different groups of commodities. Fiscal 1988 exports of categories used in the 1989 forecasts were 2/ 561,000 m.tons. 3/ 1,347 million dollars. 4/ 12,743 million. 5/ 4,838 million. I.e. includee flour. 6/ 11,095 million m.tons. F = forecast. — = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 31.—U.S. Agricultural Exports by Region

Region & country	Fiscal year*			Jan 1990	Change from year* earlier			Jan 1990
	1988	1989	1990 F		1988	1989	1990 F	
	\$ million				Percent			
WESTERN EUROPE	8,053	7,067	6,600	816	12	-12	-7	5
European Community (EC-12)	7,536	6,558	6,100	767	11	-13	-8	4
Belgium-Luxembourg	429	431	—	48	1	1	—	-17
France	563	474	—	52	14	-18	—	8
Germany, Fed. Rep.	1,315	918	—	113	4	-30	—	13
Italy	713	603	—	75	-3	-18	—	48
Netherlands	2,103	1,847	—	183	8	-12	—	-9
United Kingdom	818	736	—	72	23	-10	—	12
Portugal	340	307	—	25	25	-10	—	-24
Spain, incl. Canary Islands	848	876	—	147	29	3	—	9
Other Western Europe	516	510	500	49	20	-1	0	28
Switzerland	191	166	—	16	32	-13	—	12
EASTERN EUROPE	559	422	500	75	23	-24	-25	55
German Dem. Rep.	67	72	—	0	0	8	—	-100
Poland	167	45	—	25	165	-73	—	32,831
Yugoslavia	104	76	—	5	-21	-28	—	-18
Romania	93	82	—	38	-19	-33	—	3,123
USSR	1,940	3,299	3,200	339	194	70	-3	4
ASIA	15,944	18,685	18,200	1,587	33	17	-3	10
West Asia (Mideast)	1,904	2,270	2,200	164	14	19	-4	36
Turkey	120	238	—	26	3	97	—	19
Iraq	735	791	900	46	39	8	12	-4
Israel	334	285	—	24	37	-21	—	64
Saudi Arabia	464	482	500	30	-5	4	0	55
South Asia	805	1,171	—	78	133	45	—	-43
Bangladesh	107	213	—	0	-3	98	—	-95
India	354	243	—	12	281	-31	—	16
Pakistan	276	609	400	48	181	121	67	-59
China	813	1,494	1,200	90	161	144	-20	-21
Japan	7,274	8,152	8,200	687	31	12	0	2
Southeast Asia	1,022	974	—	113	44	-5	—	20
Indonesia	245	216	—	26	61	-12	—	277
Philippines	345	344	400	29	33	0	33	-20
Other East Asia	4,326	4,623	4,500	454	24	7	-2	52
Taiwan	1,577	1,594	1,800	170	16	1	-6	128
Korea, Rep.	2,259	2,453	2,500	239	33	9	0	28
Hong Kong	488	575	600	45	12	18	0	22
AFRICA	2,272	2,281	2,300	190	27	0	0	3
North Africa	1,659	1,798	1,800	159	30	8	0	-1
Morocco	193	216	—	15	-2	12	—	-44
Algeria	537	549	600	53	120	2	20	52
Egypt	786	955	900	76	3	21	-10	-13
Sub-Saharan	613	483	500	30	21	-21	0	32
Nigeria	44	30	—	3	-35	-31	—	-33
Rep. S. Africa	85	57	—	10	74	-34	—	284
LATIN AMERICA & CARIBBEAN	4,401	5,442	5,100	402	17	24	-6	-8
Brazil	178	152	600	4	-58	-13	0	-83
Caribbean Islands	867	1,007	—	85	5	16	—	18
Central America	414	448	—	38	10	8	—	13
Colombia	178	139	—	17	55	-22	—	52
Mexico	1,728	2,757	2,400	198	42	60	-14	0
Peru	174	81	—	33	24	-54	—	379
Venezuela	597	587	600	10	30	-2	-17	-88
CANADA	1,973	2,187	2,200	323	11	11	0	159
OCEANIA	237	268	300	27	3	13	0	8
Total	35,379	39,651	38,000	3758	27	12	-4	12
Developed countries	17,905	18,000	17,500	1,884	19	1	-3	17
Less developed countries	14,362	16,438	15,800	1,371	25	14	-5	9
Centrally planned countries	3,111	5,215	4,900	504	131	68	-6	-3

\*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1989 began Oct. 1, 1988 & ended Sept. 30, 1989. F = forecast. — = not available.

Note: Adjusted for transshipments through Canada.

Information contact: Stephen MacDonald (202) 786-1822.

## Farm Income

**Table 32.—Farm Income Statistics**

	Calendar year										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1990 F
	\$ billion										
1. Farm receipts	142.0	144.1	147.1	141.1	146.6	149.1	140.6	145.3	157.2	163	167 to 172
Crops (incl. net CCC loans)	71.7	72.5	72.3	67.1	69.5	74.3	84.0	63.8	72.6	74	78 to 82
Livestock	68.0	69.2	70.3	69.4	73.0	69.8	71.5	75.7	78.9	83	83 to 85
Farm related 1/	2.3	2.5	4.5	4.5	4.4	5.0	5.1	5.8	5.7	6	5 to 7
2. Direct Government payments	1.3	1.9	3.5	9.3	8.4	7.7	11.8	16.7	14.5	11	8 to 10
Cash payments	1.3	1.9	3.5	4.1	4.0	7.6	8.1	8.6	7.1	9	7 to 9
Value of PIK commodities	0.0	0.0	0.0	5.2	4.5	0.1	3.7	10.1	7.4	2	1 to 2
3. Total gross farm income (4+5+6) 2/	149.3	168.4	163.5	153.1	174.9	166.4	160.4	171.6	177.6	182	188 to 194
4. Gross cash income (1+2)	143.3	146.0	150.6	150.4	155.2	158.0	152.5	162.0	171.6	174	176 to 182
5. Nonmoney income 3/	12.3	13.8	14.3	13.5	13.4	11.8	10.6	10.0	10.3	10	9 to 11
6. Value of inventory change	-6.3	6.5	-1.4	-10.9	6.3	-2.4	-2.7	-0.4	-4.3	7	1 to 3
7. Cash expenses 4/	109.1	113.2	112.8	113.5	116.6	110.2	100.7	107.5	114.4	121	121 to 123
8. Total expenses	133.1	139.4	140.0	140.4	142.7	134.0	122.4	128.0	135.0	143	142 to 148
9. Net cash income (4-7)	34.2	32.8	37.8	36.9	38.6	46.7	51.8	54.6	57.2	53	54 to 56
10. Net farm income (3-8)	16.1	26.9	23.5	12.7	32.2	32.4	38.0	43.6	42.7	49	45 to 49
Deflated (1982\$)	18.8	28.6	23.5	12.2	29.9	29.2	33.4	37.2	35.2	39	34 to 38
11. Off-farm income	34.7	35.8	38.4	-37.0	38.9	42.6	44.6	46.8	51.7	54	52 to 62
12. Loan changes 5/: Real estate	0.0	0.1	3.8	2.3	-1.1	-8.0	-9.0	-7.5	-4.4	-42	-1 to 1
13. 5/: Non-real estate	5.3	6.5	3.4	0.9	-0.9	-9.6	-11.0	-4.6	-0.3	-1	0 to 3
14. Rental income plus monetary change	6.1	6.4	8.3	5.3	8.9	8.8	7.8	8.8	8.5	8	7 to 9
15. Capital expenditures 5/	18.0	16.8	13.3	12.7	12.5	9.2	8.5	9.8	10.2	12	10 to 14
16. Net cash flow (9+12+13+14-15)	37.6	37.8	38.1	32.7	33.1	30.7	31.2	39.4	50.8	47	50 to 58

1/ Income from machine hire, custom work, sales of forest products, & other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food & imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, & farm household expenses. 1987 & 1988 expenses include preliminary revisions from the 1987 Census of Agriculture. 5/ Excludes farm households. Totals may not add because of rounding. F = forecast.

Information contact: Diane Bertelsen (202) 786-1808.

**Table 33.—Balance Sheet of the U.S. Farming Sector**

	Calendar year 1/2/										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1990 F
	\$ billion										
<b>Assets</b>											
Real estate	782.4	784.7	748.8	738.7	637.7	555.9	507.3	577.0	607.9	648	675 to 685
Non-real estate	213.2	212.0	212.2	205.6	209.0	190.5	182.2	187.8	202.5	201	200 to 210
Livestock & poultry	60.6	53.5	53.0	49.7	49.6	46.3	47.6	57.9	65.7	67	66 to 70
Machinery & motor vehicles	93.1	101.4	102.0	100.8	96.9	87.8	80.3	73.9	74.7	76	75 to 79
Crops stored 3/	33.0	29.1	27.7	23.9	29.7	23.6	19.1	20.9	28.2	22	19 to 23
Financial assets	28.5	28.0	29.5	31.3	32.8	33.0	35.2	35.2	35.9	38	36 to 38
Total farm assets	995.8	996.7	961.0	944.3	846.7	746.4	689.5	784.9	810.4	849	860 to 890
<b>Liabilities</b>											
Real estate debt 4/	89.6	98.7	102.5	104.8	103.8	97.6	88.6	81.1	78.7	75	73 to 77
Non-real estate debt 5/	77.1	83.6	87.0	87.9	87.1	77.5	66.6	62.0	61.7	61	60 to 64
Total farm debt	166.8	182.3	189.5	192.7	190.7	175.1	155.1	143.1	138.4	136	134 to 140
Total farm equity	828.9	814.4	771.5	751.0	656.0	571.3	534.4	621.8	672.0	713	740 to 750
<b>Selected ratios</b>											
Debt-to-assets	18.8	18.3	19.7	20.4	22.5	23.5	22.5	18.7	17.1	16	15 to 16
Debt-to-equity	20.1	22.4	24.6	25.6	29.1	30.6	29.0	23.0	20.6	19	18 to 19
Debt-to-net cash income	488	556	497	523	493	375	299	248	231	256	240 to 250
<b>Percent</b>											

1/ As of Dec. 31. 2/ Estimates of farm assets and equity for 1987-1990 reflect revisions in real estate assets based on the 1987 Census of Agriculture. Revisions in real estate assets for 1983-1986 have not been completed. 3/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 4/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 5/ Excludes debt for nonfarm purposes. F = forecast.

Information contacts: Ken Erickson or Jim Ryan (202) 786-1798.

Table 34.—Cash Receipts From Farm Marketings, by State

Region & State	Livestock & products				Crops 1/				Total 1/			
	1988	1989	Dec 1989	Jan 1990	1988	1989	Dec 1989	Jan 1990	1988	1989	Dec 1989	Jan 1990
\$ million 2/												
NORTH ATLANTIC												
Maine	216	223	20	22	188	234	21	24	404	457	41	46
New Hampshire	80	80	5	6	77	77	8	5	137	138	11	11
Vermont	352	375	36	37	53	52	7	3	405	426	43	39
Massachusetts	105	105	9	9	297	303	30	20	402	408	39	29
Rhode Island	13	13	1	1	65	68	9	3	78	79	11	4
Connecticut	180	183	16	16	202	217	14	34	382	400	30	51
New York	1,781	1,917	185	179	824	782	68	50	2,605	2,699	253	229
New Jersey	192	192	16	17	450	435	28	21	642	627	44	37
Pennsylvania	2,348	2,566	236	226	935	977	78	101	3,284	3,542	313	327
NORTH CENTRAL												
Ohio	1,604	1,747	164	181	2,025	2,028	184	194	3,629	3,775	348	355
Indiana	1,749	1,888	185	187	2,367	2,483	215	239	4,117	4,372	400	408
Illinois	2,243	2,310	239	227	4,218	4,486	426	704	6,461	6,798	665	631
Michigan	1,206	1,293	118	127	1,464	1,592	179	128	2,870	2,885	297	254
Wisconsin	4,281	4,573	448	415	787	909	88	67	5,048	5,481	536	482
Minnesota	3,384	3,629	346	345	2,743	2,863	328	345	6,107	6,492	674	690
Iowa	5,045	5,181	488	499	4,029	3,982	342	530	9,074	9,164	830	1,037
Missouri	2,011	2,152	194	207	1,814	1,750	138	180	3,826	3,903	332	389
North Dakota	849	871	55	98	1,574	1,467	163	104	2,423	2,338	218	202
South Dakota	1,965	2,019	164	247	945	907	64	81	2,911	2,928	228	327
Nebraska	5,338	5,582	438	651	2,643	2,909	290	333	7,979	8,470	726	983
Kansas	4,265	4,498	340	512	2,329	2,107	181	200	6,594	6,805	522	712
SOUTHERN												
Delaware	444	499	32	42	149	159	8	5	592	658	41	47
Maryland	768	828	85	75	459	483	32	25	1,226	1,311	97	100
Virginia	1,294	1,404	100	112	592	598	51	38	1,386	2,000	151	148
West Virginia	179	179	13	13	70	61	5	5	248	240	19	18
North Carolina	2,179	2,350	183	194	1,094	2,026	128	83	4,173	4,377	311	257
South Carolina	488	501	43	48	590	591	37	32	1,078	1,092	81	78
Georgia	2,011	2,184	170	187	1,533	1,554	100	63	3,544	3,738	270	250
Florida	1,114	1,182	95	108	4,697	4,285	368	880	5,811	5,467	484	988
Kentucky	1,538	1,601	90	133	992	1,111	177	279	2,530	2,711	287	412
Tennessee	1,080	1,110	84	100	965	912	110	91	2,046	2,022	194	191
Alabama	1,695	1,888	123	158	708	701	50	51	2,400	2,568	173	209
Mississippi	1,178	1,275	90	98	1,164	1,054	187	98	2,341	2,330	257	195
Arkansas	2,278	2,494	182	198	1,698	1,531	110	127	3,974	4,025	292	323
Louisiana	587	598	44	43	1,299	1,090	194	114	1,885	1,885	238	157
Oklahoma	2,284	2,428	174	159	1,127	1,154	105	101	3,410	3,592	279	261
Texas	6,498	6,792	488	565	3,783	4,099	393	338	10,281	10,892	881	903
WESTERN												
Montana	818	853	64	68	570	693	88	89	1,388	1,548	150	158
Idaho	1,033	1,097	83	107	1,258	1,842	196	133	2,291	2,739	279	241
Wyoming	575	618	42	40	156	170	27	9	730	788	68	49
Colorado	2,655	2,747	175	228	1,037	1,265	138	109	3,892	4,013	313	337
New Mexico	910	924	51	68	382	413	35	27	1,272	1,337	86	85
Arizona	793	718	87	62	1,167	1,125	142	124	1,959	1,842	209	188
Utah	537	555	46	43	150	156	18	13	687	711	84	56
Nevada	150	151	11	13	79	87	8	8	229	238	20	21
Washington	1,141	1,211	89	121	2,148	2,309	168	203	3,287	3,520	285	324
Oregon	669	698	57	49	1,427	1,523	101	89	2,098	2,221	159	138
California	4,704	5,470	464	448	11,894	12,251	1,029	815	16,598	17,721	1,493	1,063
Alaska	10	10	1	1	20	21	2	1	30	31	3	2
Hawaii	89	89	7	7	479	454	38	39	568	542	46	46
UNITED STATES	78,862	83,786	6,846	7,646	72,569	74,142	8,883	7,145	151,431	157,928	13,730	14,791

1/ Sales of farm products include receipts from commodities placed under CCC loans minus value of redemptions during the period. 2/ Estimates as of end of current month. Totals may not add because of rounding.

Information contact: Roger Strickland (202) 786-1804.

Table 35.—Cash Receipts From Farming

	Annual							1989				1990
	1984	1985	1986	1987	1988	1989	Jan	Sept	Oct	Nov	Dec	Jan
\$ million												
Farm marketings & CCC loans*	142,438	144,135	135,539	139,468	151,431	157,928	14,040	14,805	18,258	18,800	13,730	14,791
Livestock & products	72,968	88,845	71,534	75,717	78,862	83,788	7,077	7,060	8,071	7,817	8,846	7,846
Meat animals	40,832	38,589	39,122	44,276	45,975	47,675	4,191	4,028	5,085	4,619	3,617	4,445
Dairy products	17,944	18,063	17,753	17,710	17,668	19,338	1,611	1,586	1,683	1,770	1,920	1,827
Poultry & eggs	12,223	11,211	12,661	11,480	12,884	14,471	1,104	1,259	1,153	1,219	1,164	1,198
Other	1,969	1,982	1,997	2,252	2,354	2,302	170	207	150	309	145	178
Crops	69,471	74,290	84,005	63,751	72,569	74,142	8,963	7,545	10,187	8,783	8,883	7,145
Food grains	9,740	8,993	5,638	5,581	7,700	8,114	821	782	714	650	579	659
Feed crops	15,668	22,520	17,161	13,102	15,291	16,781	1,826	1,634	2,258	1,848	1,698	1,973
Cotton (lint & seed)	3,874	3,687	3,806	4,087	4,668	5,027	734	466	788	1,115	828	443
Tobacco	2,813	2,722	1,918	1,827	2,039	2,153	298	460	368	311	184	291
Oil-bearing crops	13,841	12,474	10,571	11,159	13,699	12,211	1,568	1,120	2,882	1,713	1,071	1,400
Vegetables & melons	9,138	8,558	8,826	9,718	9,819	10,458	842	1,205	1,133	659	489	722
Fruits & tree nuts	6,733	6,857	7,248	8,257	8,877	8,757	582	972	1,036	1,054	826	907
Other	8,085	6,381	9,041	10,020	10,476	10,842	683	928	908	1,533	1,209	749
Government payments	8,430	7,704	11,813	15,747	14,480	9,498	343	222	959	926	583	381
Total	150,889	151,839	147,352	156,215	165,911	167,427	14,383	14,827	19,217	17,528	14,293	15,172

\*Receipts from loans represent value of commodities placed under CCC loans minus value of redemptions during the month.

Information contact: Roger Strickland (202) 786-1804.

Table 36.—Farm Production Expenses

	Calendar year										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1990 F
\$ million											
Feed	20,971	20,855	18,592	21,725	19,852	18,015	18,179	18,898	22,462	24,000	20,000 to 23,000
Livestock	10,870	8,099	9,684	8,814	9,498	8,958	9,744	11,845	12,812	13,000	12,000 to 15,000
Seed	3,220	3,428	3,172	2,993	3,448	3,350	2,984	3,009	3,138	4,000	3,000 to 6,000
Farm-origin inputs	34,861	33,282	31,448	33,532	32,798	30,323	28,007	33,752	38,412	41,000	37,000 to 41,000
Fertilizer	8,491	9,409	8,018	7,087	7,429	7,258	5,787	8,210	7,000	8,000	7,000 to 8,000
Fuels & oils	7,879	8,570	7,888	7,503	7,143	8,584	4,790	5,042	5,144	6,000	6,000 to 7,000
Electricity	1,526	1,747	2,041	2,148	2,166	2,150	1,942	2,393	2,572	3,000	2,000 to 3,000
Pesticides	3,539	4,201	4,282	4,154	4,767	4,994	4,484	4,588	4,716	5,000	5,000 to 6,000
Manufactured inputs	22,435	23,927	22,229	20,870	21,505	20,988	17,003	18,233	19,432	22,000	22,000 to 24,000
Short-term interest	8,717	10,722	11,349	10,515	10,396	6,821	7,795	7,305	7,287	8,000	7,000 to 8,000
Real estate interest 1/	7,544	9,142	10,481	10,815	10,733	9,878	9,131	8,187	7,885	7,000	6,000 to 8,000
Total interest charges	16,261	19,864	21,830	21,430	21,129	18,699	16,926	15,492	15,172	15,000	14,000 to 18,000
Repair & maintenance 1/ 2/	7,075	7,021	6,428	8,529	6,416	6,370	6,426	6,546	6,858	7,000	7,000 to 8,000
Contract & hired labor	9,293	8,931	10,076	9,725	9,729	9,799	9,890	10,821	11,202	11,000	11,000 to 12,000
Machine hire & custom work	1,823	1,984	2,025	1,896	2,170	2,184	1,810	1,956	2,171	2,000	2,000 to 3,000
Marketing, storage, & transportation	3,070	3,523	4,301	3,904	4,012	4,127	3,852	3,823	3,279	4,000	4,000 to 5,000
Misc. operating expenses 1/	8,881	6,909	7,262	8,089	9,106	8,232	7,993	8,306	8,809	9,000	8,000 to 10,000
Other operating expenses	28,142	28,368	30,089	31,143	31,433	30,712	29,771	31,452	32,319	34,000	33,000 to 37,000
Capital consumption 1/	21,474	23,573	24,287	23,873	23,105	20,847	18,918	17,864	17,722	18,000	18,000 to 20,000
Taxes 1/	3,891	4,246	4,036	4,469	4,059	4,231	4,125	4,345	4,378	4,000	4,000 to 5,000
Net rent to nonoperator landlord	8,075	8,184	8,059	5,080	8,640	8,158	6,737	7,060	7,527	8,000	8,000 to 9,000
Other overhead expenses	31,440	34,003	34,361	33,402	35,804	33,236	29,780	29,069	29,527	31,000	31,000 to 34,000
Total production expenses	133,139	139,444	139,980	140,377	142,869	133,956	122,387	127,898	134,963	143,000	142,000 to 146,000

1/ Includes operator dwellings. 2/ Beginning in 1982, miscellaneous operating expenses include other livestock purchases & dairy assessments. Totals may not add because of rounding. F = forecast. 1987 and 1988 expenses include preliminary revisions from the Census of Agriculture.

Information contact: Chris McGeth (202) 786-1804. Diana Berntsen (202) 786-1808.

Table 37.—CCC Net Outlays by Commodity &amp; Function

COMMODITY/PROGRAM	Fiscal year									
	1982	1983	1984	1985	1986	1987	1988	1989	1990 E	1991 E
	\$ million									
Feed grains	5,397	6,815	-758	5,211	12,211	13,967	9,053	3,384	4,270	6,099
Wheat	2,238	3,419	2,536	4,691	3,440	2,836	678	53	522	2,061
Rice	164	664	333	990	947	908	128	831	818	873
Upland cotton	1,190	1,363	244	1,553	2,142	1,788	666	1,461	-242	710
Tobacco	103	880	348	455	253	-348	-453	-367	-307	-138
Dairy	2,182	2,528	1,502	2,085	2,337	1,166	1,295	679	483	817
Soybeans	169	288	-585	711	1,597	-478	-1,678	-86	236	52
Peanuts	12	-6	1	12	32	8	7	13	-6	3
Sugar	-5	49	10	184	214	-65	-248	-25	0	0
Honey	27	48	90	81	89	73	100	42	89	44
Wool	54	94	132	109	123	152	175	93	121	120
Operating expense 3/	294	328	362	348	457	535	814	820	626	633
Interest expenditure	-13	3,525	1,064	1,435	1,411	1,219	395	65	609	262
Export programs 4/	65	398	743	134	102	276	200	-102	102	67
1988/89 Disaster/										
Livestock Assistance	0	0	0	0	0	0	0	3,919	2,98	0
Other	-225	-1,542	1,295	-314	488	371	1,695	143	979	536
Total	11,652	18,851	7,315	17,683	25,841	22,408	12,461	10,523	8,174	11,739
FUNCTION										
Price-support loans (net)	7,015	8,438	-27	8,272	13,828	12,199	4,579	-928	431	704
Direct payments										
Deficiency	1,185	2,780	812	8,302	8,166	4,833	3,971	5,798	4,520	8,445
Diversion	0	705	1,504	1,525	64	382	8	-1	0	0
Dairy termination	0	0	0	0	489	587	260	168	178	108
Other	0	0	0	0	27	60	0	42	4	8
Disaster	308	115	1	0	0	0	8	4	0	0
Total direct payments	1,491	3,600	2,117	7,827	6,746	5,862	4,245	6,011	4,702	8,557
1988/89 crop disaster	0	0	0	0	0	0	0	3,386	2,8	0
Emergency livestock/ forage assistance	16	0	0	0	0	0	31	533	90	0
Purchases (net)	2,031	2,540	1,470	1,331	1,670	-479	-1,131	116	-87	238
Producer storage payments	679	964	268	329	485	832	658	174	127	70
Processing, storage, & transportation	355	665	639	657	1,013	1,658	1,113	659	465	490
Operating expense 3/	294	328	362	346	457	535	814	820	626	633
Interest expenditure	-13	3,525	1,064	1,435	1,411	1,219	395	65	609	262
Export Programs 4/	65	398	743	134	102	278	200	-102	102	67
Other	-281	-1,807	879	-648	329	305	1,757	-13	1,103	718
Total	11,652	18,851	7,315	17,683	25,841	22,408	12,461	10,523	8,174	11,739

1/ Fiscal 1988 wool & mohair program outlays were \$130,635,000 but include a one-time advance appropriation of \$126,108,000, which was recorded as a wool program receipt by Treasury. 2/ Benefits to farmers under the Disaster Assistance Act of 1988 are being paid in generic certificates, & are not recorded directly as disaster assistance outlays. 3/ Does not include CCC Transfers to General Sales Manager. 4/ Includes Export Guarantee Program, Direct Export Credit Program, & CCC Transfers to the General Sales Manager. E = Estimated in the fiscal 1991 President's Budget. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Information contact: Richard Pazdaelski (202) 447-5148.

## Food Expenditures

Table 38.—Food Expenditure Estimates

	Annual			1989		1990		1990 year-to-date	
	1987	1988	1989	Dec	Jan P	Feb P	Jan P	Feb P	
\$ billion									
Sales 1/ Off-premise use 2/ Meals & snacks 3/	245.5 174.8	257.8 187.4	275.7 195.8	25.5 18.4	22.6 15.2	21.4 14.7	22.8 15.2	43.9 29.9	
1989 billion									
Sales 1/ Off-premise use 2/ Meals & snacks 3/	272.6 190.3	274.8 195.9	275.5 195.8	25.1 18.1	21.4 14.9	20.1 14.3	21.4 14.9	41.5 29.2	
Percent change from year earlier (\$ bil.)									
Sales 1/ Off-premise use 2/ Meals & snacks 3/	3.6 10.2	5.0 7.2	6.9 4.5	6.4 -0.2	6.7 2.4	5.4 4.1	6.7 2.4	6.1 3.2	
Percent change from year earlier (1989 \$ bil.)									
Sales 1/ Off-premise use 2/ Meals & snacks 3/	-0.7 6.0	0.7 3.0	0.3 -0.1	0.2 -4.6	-1.2 -2.0	-2.7 -0.5	-1.2 -2.0	-1.9 -1.3	

1/ Food only (excludes alcoholic beverages). Not seasonally adjusted. 2/ Excludes donations & home production. 3/ Excludes donations, child nutrition subsidies, & meals furnished to employees, patients, & inmates. P = preliminary.

NOTE: This table differs from Personal Consumption Expenditures (PCE), table 2, for several reasons: (1) this series includes only food, not alcoholic beverages & pet food, which are included in PCE; (2) this series is not seasonally adjusted, whereas PCE is seasonally adjusted at an annual rate; (3) this series reports sales only, but PCE includes food produced & consumed on farms & food furnished to employees; (4) this series includes all sales of meals & snacks. PCE includes only purchases using personal funds, excluding business travel & entertainment. For a more complete discussion of the differences, see "Developing an Integrated Information System for the Food Sector," Agr.-Econ. Rpt. No. 575, Aug 1987.

Information contact: Alden Manchester (202) 786-1880.

## Transportation

Table 39.—Rail Rates; Grain & Fruit/Vegetable Shipments

	Annual			1989				1990		
	1987	1988	1989	Feb	Sept	Oct	Nov	Dec	Jan	Feb
<b>Rail freight rate index 1/</b> (Dec. 1984=100)										
All products	100.1	104.8	106.4	105.9	106.8	106.6	106.9 P	106.9 P	107.1 P	107.1 P
Farm products	99.3	105.6	108.4	108.9	106.2	108.3	108.4 P	108.5 P	107.1 P	108.8 P
Grain	98.7	105.4	108.7	109.2	108.4	108.6	108.7 P	108.7 P	108.2 P	109.0 P
Food products	98.6	103.2	103.9	103.1	104.1	104.1	104.1 P	104.3 P	105.8 P	105.0 P
<b>Grain shipments</b>										
Rail carloadings (1,000 cars) 2/	29.0	30.7	28.4	30.6	24.4 P	28.9 P	31.7 P	29.4 P	32.7 P	32.4 P
Fresh fruit & vegetable shipments										
Piggy back (1,000 cwt) 3/ 4/	588	535	504	428	462	408	440	459	466	453
Rail (1,000 cwt) 3/ 4/	630	607	593	631	415	472	584	725	704	684
Truck (1,000 cwt) 3/ 4/	9,137	9,679	9,694	8,884	8,281	9,040	9,425	9,278	7,888	7,776
<b>Cost of operating trucks</b> hauling produce 5/										
Owner operator (cts./mile)	116.3	118.7	124.1	122.1	124.3	125.5	126.2	128.9	128.9	127.5
Fleet operation (cts./mile)	116.5	118.4	123.4	121.4	123.4	124.5	125.5	128.7	128.7	127.5

1/ Department of Labor, Bureau of Labor Statistics. 2/ Weekly average; from Association of American Railroads. 3/ Weekly average; from Agricultural Marketing Service, USDA. 4/ Preliminary data for 1989 & 1990. 5/ Office of Transportation, USDA. P = preliminary.

Information contact: T.Q. Hutchinson (202) 786-1840.

## Indicators of Farm Productivity

**Table 40.—Indexes of Farm Production Input Use & Productivity**

(See the March 1990 Issue.)

Information contact: Jim Hauven (202) 786-1459.

## Food Supply and Use

**Table 41.—Per Capita Consumption of Major Food Commodities**

(See the January-February 1990 Issue.)

Information contact: Judy Putnam (202) 786-1870.

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